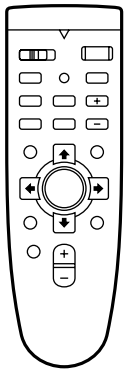
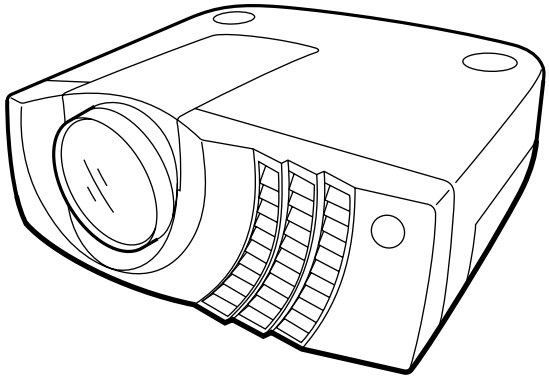
SERVICE MANUAL

MODEL	DEST.
VPL-PX21	WORLD
VPL-PX31	WORLD

MODEL	DEST.
RM-PJM610	WORLD





LCD DATA PROJECTOR

SONY

⚠警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

WARNING!!

AN INSULATED TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY A ⚠ MARK ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION!!

AFIN D’ÉVITER TOUT RISQUE D’ÉLECTROCUTION PROVENANT D’UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D’ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ Á L’ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS Á LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D’UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

Trademarks

Trademarks and registered trademarks used in this manual are follows.

- PC-9801 is the trademark of NEC Corporation.
- Macintosh is the trademark of Apple Computer Corporation.

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SONY

4-080-134-**11**(1)

LCD Data Projector

Operating Instructions ____ GB
Mode d'emploi ____ FR
Manual de instrucciones ____ ES

VPL-PX21
VPL-PX31

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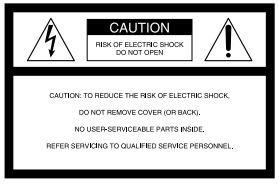
Section 1
Operating Instructions

This section is extracted from operation manual.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

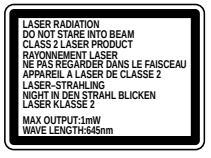
This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For the customers in the USA

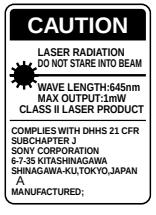
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.



This label is located on the rear of the Remote Commander.

This label is located on the side of the Remote Commander.



This label is located on the rear of the Remote Commander.

This label is located on the rear of the Remote Commander.

Laser light shines out of this window.

Caution

use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes

- Do not aim the laser at people or not look into the laser transmitter.
- When the Remote Commander causes malfunction, consult with qualified Sony personnel. We change the Remote Commander as new one according to the guarantee.

For the customers in Canada

This Class A digital apparatus complies with Canadian ICES-003.

For the customers in the United Kingdom

WARNING
THIS APPARATUS MUST BE EARTHED

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Voor de klanten in Nederland

Bij dit product zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

The socket-outlet should be installed near the equipment and be easily accessible.

Warning on power connection

Use a proper power cord for your local power supply.

	The United States, Canada		Continental Europe		UK, Ireland, Australia, New Zealand	Japan
Plug type	VM0233	290B	YP-12A	COX-07	—[1]	YP332
Female end	VM0089	386A	YC-13B	COX-02	VM0310B	YC-13
Cord type	SJT	SJT	H05VV-F	H05VV-F	N13237/CO-228	VCTF
Rated Voltage & Current	10A/125V	10A/125V	10A/250V	10A/250V	10A/250V	7A/125V
Safety approval	UL/CSA	UL/CSA	VDE	VDE	VDE	DENTORI

1) Use the correct plug for your country.

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Precautions

On safety

- Check that the operating voltage of your unit is identical with the voltage of your local power supply.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- The wall outlet should be near the unit and easily accessible.
- The unit is not disconnected to the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Do not look into the lens while the lamp is on.
- Do not aim the laser at people or not look into the laser transmitter.
- Do not place your hand or objects near the ventilation holes — the air coming out is hot.
- Be careful not to catch your fingers by the adjuster when you lift up the projector. Do not push hard on the top of the projector with the adjuster out.

On illumination

- To obtain the best picture, the front of the screen should not be exposed to direct lighting or sunlight.
- Ceiling-mounted spot lighting is recommended. Use a cover over fluorescent lamps to avoid lowering the contrast ratio.
- Cover any windows that face the screen with opaque draperies.
- It is desirable to install the projector in a room where floor and walls are not of light-reflecting material. If the floor and walls are of reflecting material, it is recommended that the carpet and wall paper be changed to a dark color.

On preventing internal heat build-up

After you turn off the power with the I / ⏻ key on the Remote Commander or on the control panel, do not disconnect the unit from the wall outlet while the cooling fan is still running.

Caution

The projector is equipped with ventilation holes (intake) on the bottom and ventilation holes (exhaust) on rear. Do not block or place anything near these holes, or internal heat build-up may occur, causing picture degradation or damage to the projector.

On cleaning

- To keep the cabinet looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents, such as thinner, benzene, or abrasive cleansers, since these will damage the cabinet.
- Avoid touching the lens. To remove dust on the lens, use a soft dry cloth. Do not use a damp cloth, detergent solution, or thinner.
- Clean the filter at regular intervals every 300 hours.

On repacking

- Save the original shipping carton and packing material; they will come in handy if you ever have to ship your unit. For maximum protection, repack your unit as it was originally packed at the factory.

On LCD projector

The LCD projector is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD projector. This is a normal result of the manufacturing process and does not indicate a malfunction.

Features

High brightness, high picture quality

- **High brightness**
  The high aperture ratio LCD panel with a microlens and the 200 W UHP lamp allow high brightness (light output 1800 ANSI lumen for VPL-PX21 (without a microlens), and 2800 ANSI lumen for VPL-PX31) and excellent uniformity on the picture.
- **High resolution**
  By adopting three 1.3-inch, approximately 790,000-pixels XGA panels, this projector can project sharp picture with the resolutions of 1024 × 768 pixels for RGB input and 750 horizontal TV lines for video input.
- **High picture performance**
  This projector utilizes 3D Digital Gamma correction for good picture uniformity. And the internal RGB enhancer provides sharper RGB images.

Simple setup

- **Sony original high performance APA (Auto Pixel Alignment) function**
  You can get the clearest picture automatically by simply pressing the APA key when the signal is input from a computer.
- **Simple setup with external equipment**
  This projector has 44 kinds of preset data for input signals. You can get a suitable picture by connecting an equipment with supplied cable and pressing the APA key.
- **USB, Digital RGB and 5BNC connectors**
  USB equipment (e.g., USB mouse) allows you to expand your system. Using the application software supplied with the projector allows you to control the projector from your computer operated with Windows[1] 98/98 Second Edition/2000 operating system. The Digital RGB connector allows you to connect the projector to a Digital RGB equipment. The 5BNC input connector allows you to connect the projector to a workstation output high-resolution signals and to connect the projector to a computer from a long distance.

Easy presentation

- **Remote Commander with mouse control and laser pointer functions**
  With the built-in mouse receiver, you can operate a computer with the Remote Commander. For presentations, you can use the laser pointer built into the Remote Commander.
- **Digital ZOOM, FUNCTION and HELP keys on the Remote Commander**
  The Digital ZOOM allows you to enhance your presentation by zoooming in on the image.
  You can allocate a presentation file to the FUNCTION keys by using the application software (CD-ROM) supplied with the projector. Just pressing the FUNCTION key opens the file immediately.
  The HELP key will be helpful if you encounter a problem during operation.
- **High portability**
  This projector is compact-7.2kg (15lb 14oz), portable size. With such a feature, a carrying handle contributes to a convenient carrying, and you can carry it everywhere you want.

Multi scan compatibility

- **Scan converter built-in**
  This projector has a built-in scan converter which converts the input signal within 1024 × 768 pixels.
- **Accept various input signals**
  This projector accepts video signals of the composite, S video, and component as well as the 15k RGB, VGA[2], SVGA[2], XGA[2] and SXGA[2] signals, which all can be displayed.
- **Compatible with six color systems**
  NTSC 3.58, PAL, SECAM, NTSC 4.43[3], PAL-M or PAL-N color system can be selected automatically or manually.

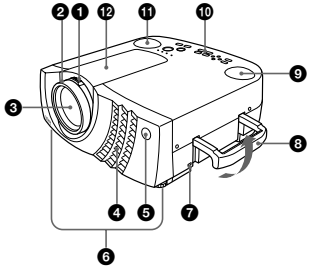
Other functions

Plug & Play
This projector complies with DDC1 and DDC2B. (DDC1 and DDC2B are the Display Data Channel (DDC™)[4] standard in the VESA standard.)
When connecting a DDC1 host system, the projector synchronizes with V.CLK that follows the VESA standard and outputs EDID (Extended Display Identification Data) to the data line.
When connecting a DDC2B host system, the projector automatically switches to the appropriate communication mode.

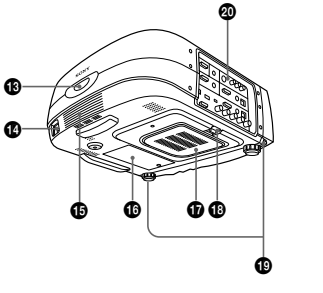
1) Windows is a registered trademark of Microsoft Corporation (U.S.A and other countries).
2) VGA, SVGA, XGA and SXGA are registered trademarks of the International Business Machines Corporation, U.S.A.
3) NTSC4.43 is the color system used when playing back a video recorded on NTSC on an NTSC4.43 system VCR.
4) DDC™ is a registered trademark of the Video Electronics Standard Association.

Location and Function of Controls

Front/Left Side



Rear/Right Side/Bottom



1 Zoom ring
Adjusts the size of the picture.

2 Focus ring
Adjusts the picture focus.

3 Lens
Open the lens cap before projection.

4 Ventilation holes (exhaust)

5 Front remote control detector (SIRCS receiver)

6 Adjuster
When a picture is projected on the out of the screen, adjust the picture using this adjuster.
For details on how to use the adjusters, see "How to use the adjuster" on page 10 (GB).

7 Security lock
Connects to an optional security cable (Kensington's).

> The security lock corresponds to Kensington's MicroSaver Security System.
> If you have any comment, contact
> Kensington
> 2853 Campus Drive, San Mates, CA 94403
> U.S.A.
> Tel: 800-535-4242: extension 3348
> Home page address:
> http://www.kensington.com/

8 Carrying handle
Pull up the handle from the projector for carrying.

9 Left speaker

10 Control panel
For details, see "Control panel" on page 11 (GB).

11 Right speaker

12 Lens hood

13 Rear remote control detector (SIRCS receiver)

14 AC IN socket
Connects the supplied AC power cord.

⓯ Rear speaker

⓰ Lamp cover

⓱ Ventilation holes (intake)/air filter cover

Notes
- Do not place anything near the ventilation holes as it may cause internal heat build-up.
- Do not place your hand or objects near the ventilation holes — the air coming out is hot.

⓲ Air filter cover button
Used to remove the air filter cover.
For details, see "Cleaning the Air Filter" on page 33 (GB).

Note
Clean the air filter every 300 hours to ensure optimal performance.

⓳ Adjuster buttons

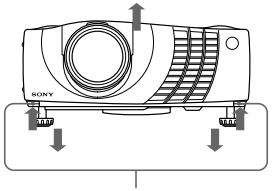
⓴ Connector panel
For details, see page 12 (GB).

How to use the adjuster

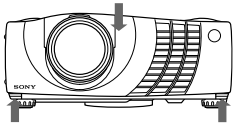
To adjust the height

Adjust the height of the projector as follows:

1 Lift the projector and press the adjuster buttons. The adjusters will extend from the projector.

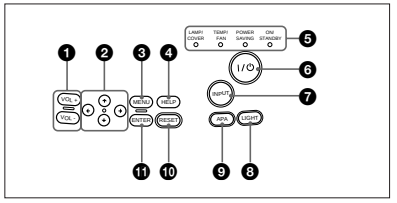


2 While pressing the buttons, lower the projector. Then, release the buttons.
For fine adjustment, turn the adjusters to the right and the left.



Notes
- Be careful not to let the projector down on your fingers.
- Do not push hard on the top of the projector with the adjusters out.

Control panel



❶ VOL +/– keys
Adjust the volume of the built-in speakers and output level of the AUDIO jack.
+ : Increases the volume.
– : Decreases the volume.

❷ Arrow keys (↑/↓/←/→)
Used to select the menu or to make various adjustments.

❸ MENU key
Displays the on-screen menu. Press again to clear the menu.

❹ HELP key
If you need help information during an operation, press this key to display help messages. The Help menu lists error recoveries depending on problem type.

❺ Indicators
LAMP/COVER: Lights up or flashes under the following conditions:
- Lights up when the lamp has reached the end of its life or becomes a high temperature.
- Flashes when the lamp cover or air filter cover is not secured firmly.

TEMP (Temperature)/FAN: Lights up or flashes under the following conditions:
- Lights up when temperature inside the projector becomes unusually high.
- Flashes when the fan is broken.

POWER SAVING: Lights up when the projector is in the power saving mode. When POWER SAVING in the SET SETTING menu is set to ON, the projector goes into the power saving mode if no signal is input for 10 minutes. Although the lamp goes out, the cooling fan keeps running. In the power saving mode, any key does not function for the first 40 seconds. The power saving mode is canceled when a signal is input or any key is pressed.

ON/STANDBY: Lights up or flashes under the following conditions:
- Lights in red when the AC power cord is plugged into the wall outlet. Once in the standby mode, you can turn on the projector with the I / ⏻ key.
- Lights in green when the power is turned on.
- Flashes in green while the cooling fan runs after turning off the power with the I / ⏻ key. The fan runs for about 120 seconds after turning off the power.
  The ON/STANDBY indicator flashes quickly for the first 40 seconds.
  During this time, you cannot turn the power back on with the I / ⏻ key.

For details on the LAMP/COVER and the TEMP/FAN indicators, see page 35 (GB).

❻ I / ⏻ (on / standby) key
Turns on and off the projector when the projector is in the standby mode. The ON/STANDBY indicator lights in green when the power is turned on.
When turning off the power, press the I / ⏻ key twice following the message on the screen, or press and hold the key for about one second.
For details on steps for turning off the power, see "To turn off the power" on page 20 (GB).

❼ INPUT key
Selects the input signal. Each time you press the key, the input signal switches as follows:

The audio signals are common to the VIDEO and S-VIDEO.

❽ LIGHT key
If you press this key while the power is on, the keys on the control panel will be displayed in orange. Press this key to turn off the light.

❾ APA (Auto Pixel Alignment) key
Adjusts a picture to be projected clearest automatically while a signal from the computer is input. Adjust the shift (up/down and left/right) at the same time automatically.

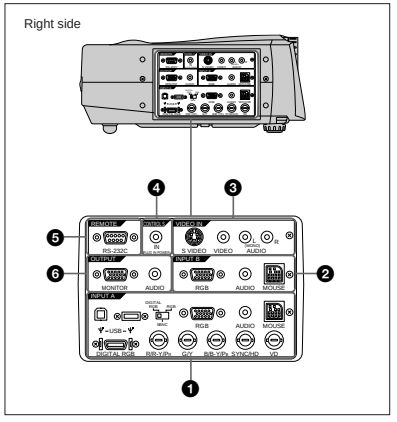
Note
Press the APA key when the full image is displayed on the screen. If there are black edges around the image, the APA function will not function properly and the image may extend beyond the screen.

❿ RESET key
Resets the value of an item back to its factory preset value. This key functions when the menu or a setting item is displayed on the screen.

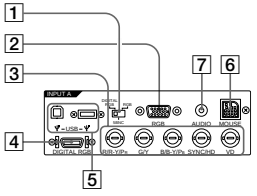
⓫ ENTER key
Enters the settings of items in the menu system.

http://getMANUAL.com

Connector panel



❶ INPUT A connectors



1 **DIGITAL RGB/5BNC/RGB switch:** Selects DIGITAL RGB, 5BNC or RGB on INPUT A connectors. Select the appropriate position depending on the input signal.
DIGITAL RGB: Signal input from DIGITAL RGB connector.
5BNC: Signal input from the 5BNC connector.
RGB: Signal input from the RGB connector.

2 **RGB input connector (HD D-sub 15-pin, female):** Connects to the monitor output on a computer using the supplied cable. This connector only accepts signals from a computer.

3 **5BNC input connectors (R/R-Y/PR, G/Y, B/B-Y/PB, SYNC/HD, VD connectors) (BNC type):** Connect to a high-resolution computer or VCR where signals are transmitted long distances; for example, when the projector has been hung from the ceiling.
According to the connected equipment, computer, component (R-Y/Y/B-Y), HDTV or DTV (DTV GBR, DTV YPBPR) signal is selected.

4 **DIGITAL RGB input connector (DFP 20-pin, TMDS):** Connects to a digital RGB output connector on external equipment.

5 **USB connector:** Connects your computer or USB equipment.
A plug: (Right, for downstream, 4-pin): Connects to USB equipment.
B plug: (Left, for upstream, 4-pin): Connects to a computer. If you connect the projector and a computer, the projector automatically assumes that a USB mouse is connected; this allows you to control the mouse from the Remote Commander. The application software supplied with the projector allows you to control the projector from your computer.

6 **MOUSE (13-pin) connector:** Connects to the mouse port on a computer to control the mouse function using the supplied mouse cable.

7 **AUDIO (stereo mini-jack) jack:** Connects to the audio output on a computer.

❷ INPUT B connectors
Connect to external equipment such as a computer. You can control the mouse signal with the Remote Commander.
RGB input (HD D-sub 15-pin, female): Connects to the monitor output on a computer using the supplied cable. This connector only accepts signals from a computer.
AUDIO (stereo mini-jack): Connects to the audio output on a computer.
MOUSE (13-pin): Connects to the mouse port on a computer to control the mouse function using the supplied mouse cable.

❸ VIDEO IN jacks
Connect to external video equipment such as a VCR.
S VIDEO (mini DIN 4-pin): Connects to the S video output (Y/C video output) on video equipment.
VIDEO (phono type): Connects to the composite video output.
AUDIO input L (MONO)/R (phono type): Connect to the audio output of equipment. For stereo equipment, use both the L and R jacks; for monaural equipment, use the L (MONO) jack only.
The audio signals are common to the VIDEO and S VIDEO.

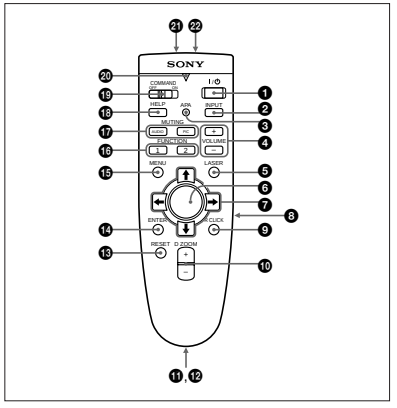
❹ CONTROL S IN/PLUG IN POWER (DC 5V output) jack
Connects to the control S out jacks of the Sony equipment. Connects to the CONTROL S OUT jack on the supplied Remote Commander when using it as a wired Remote Commander. In this case, you do not need to install the batteries in the Remote Commander, since the power is supplied from this jack.

❺ RS-232C connector (D-sub 9-pin, female)
Connects to a computer to operate the projector from the computer.

❻ OUTPUT connectors
MONITOR (HD D-sub 15-pin, female): Connects to the video input connector on the monitor. Outputs signals from the selected channel in the INPUT A (RGB or 5BNC) or INPUT B (RGB) connector. This connector does not output any signals from the DIGITAL RGB connector.
AUDIO (phono type): Connects to external active speakers.
The volume of the speakers can be controlled by the VOLUME +/– keys on the Remote Commander or the VOL +/– keys on the control panel.

Remote Commander

The keys which have the same names as on the control panel function identically.
You can control a connected computer using the Remote Commander.
For details, see "Connecting with a Computer" on page 15 (GB).



Notes on laser beam

- **Do not look into the laser transmitter.**
- **Do not aim the laser at people.**

❶ I / ⏻ key

❷ INPUT key

❸ APA (Auto Pixel Alignment) key

❹ VOLUME +/– keys

❺ LASER key
Emits laser beam from the laser transmitter when you press this key.

❻ Joy stick
Functions as a mouse of a computer connected to the unit.

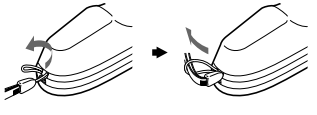
❼ Arrow keys (↑/↓/←/→)

❽ L CLICK key
Functions as a left button on a mouse. When connected to a Macintosh[1] computer, the L CLICK key functions as a mouse button.

❾ R CLICK key
Functions as a right button on a mouse. When connected to a Macintosh computer, the R CLICK key functions as a mouse button.

❿ D ZOOM +/– key
Enlarges the image at a desired location on the screen.
+: Pressing the + key once displays the icon. This icon indicates the point you want to enlarge. Use an arrow key (↑/↓/←/→) to move the icon to the point to be enlarged. Press the + key repeatedly until the image is enlarged to your requirements.
–: Pressing the – key reduces an image that has been enlarged with the D ZOOM + key.

⓫ Strap holder
Attaches the supplied strap.



⓬ CONTROL S OUT jack (stereo minijack)
Connects to the CONTROL S IN jack on the projector with the connecting cable (not supplied) when using the Remote Commander as a wired one. In this case, you do not need to install the batteries since the power is supplied via the CONTROL S IN jack on the projector.

⓭ RESET key

⓮ ENTER key

⓯ MENU key

⓰ FUNCTION 1/2 keys
When you connect the projector with a computer, you can open a file on the screen by just pressing the FUNCTION key. This will enhance your presentation. To use this function, allocate a file to the FUNCTION key by using the application software. For details on how to allocate a file to the FUNCTION key, refer to the help file of the application software.

1) Macintosh is a registered trademark of Apple Computer, Inc.

⓱ MUTING keys
Cut off the picture and sound.
PIC: Cuts off the picture. Press again to restore the picture.
AUDIO: Cuts off the sound from speakers and AUDIO jack. Press again or press the VOLUME + key to restore the sound.

⓲ HELP key
If you need help information during an operation, press this key to display help messages.

⓳ COMMAND ON/OFF switch
When this switch is set to OFF, no key on the Remote Commander function. This saves the battery power.

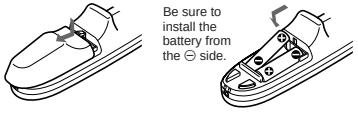
⓴ Transmission indicator
Lights up when you press a key on the Remote Commander.
This indicator does not light up when you use the laser pointer.

㉑ Infrared transmitter

㉒ Laser transmitter

Battery installation

1 Push and slide to open the lid, then install the two size AA (R6) batteries (supplied) with the correct polarity.



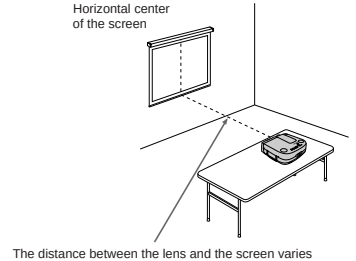
2 Replace the lid.

Notes on batteries
- Make sure that the battery orientation is correct when inserting batteries.
- Do not mix an old battery with a new one, or different types of batteries.
- If you will not use the Remote Commander for a long time, remove the batteries to avoid damage from battery leakage. If batteries have leaked, remove them, wipe the battery compartment dry and replace the batteries with new ones.

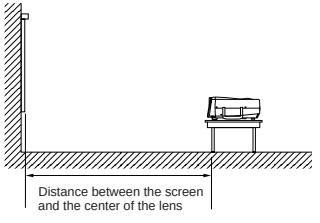
Notes on Remote Commander operation
- Make sure that there is nothing to obstruct the infrared beam between the Remote Commander and the remote control detector on the projector.
- The operation range is limited. The shorter the distance between the Remote Commander and the projector is, the wider the angle within which the commander can control the projector.

Installing the Projector

This section describes the installation arrangements for installing the projector.



The distance between the lens and the screen varies depending on the size of the screen. Use the following table as a guide.



Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150	200	300
Minimum Distance	1.5 (4.9)	2.3 (7.5)	3.1 (10.0)	3.9 (12.6)	4.6 (15.2)	5.8 (19.1)	7.8 (25.5)	11.7 (38.4)
Maximum Distance	1.8 (6.0)	2.8 (9.1)	3.7 (12.3)	4.7 (15.4)	5.7 (18.6)	7.1 (23.3)	9.5 (31.2)	14.3 (46.9)

Connecting

Connecting with a Computer

This section describes how to connect the projector to a computer.
You can control the projector from your computer by using the application software supplied with the projector, and/or you can use USB equipment. For details, see "Using USB equipment (e.g., USB mouse)".

When the projector is connected to a computer, you can control the mouse of a computer by the Remote Commander.
The R/L CLICK keys and joy stick function as follows.

Note
Make sure that there is nothing to obstruct the infrared beam between the Remote Commander and the remoter control detector on the projector.

Key and joy stick	Function	
	IBM PC/AT[1] compatible, Serial	Macintosh
R CLICK (front)	Right button	Mouse button
L CLICK (rear)	Left button	Mouse button
Joy stick	Corresponds with the movements of the mouse	

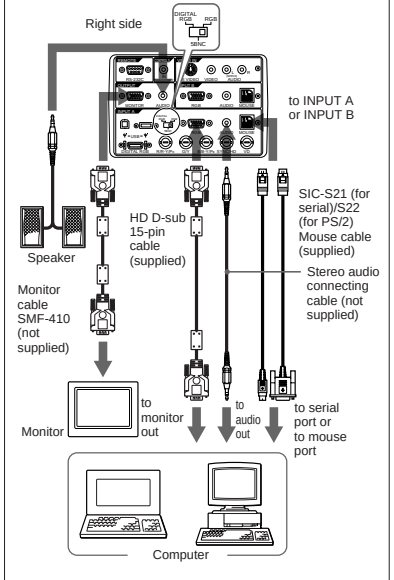
Also refer to the instruction manual of equipment to be connected.

Notes
- This unit accepts the VGA, SVGA, XGA or SXGA signals. However, we recommend you to set the output signal of your computer to the XGA.
- If you set your computer, such as a notebook type IBM PC/AT compatible, to output the signal to both the display of your computer and the external monitor, the picture of the external monitor may not appear properly. In such cases, set the output mode of your computer to output the signal to only the external monitor.
  For details, refer to the operating instructions supplied with your computer.
- The RGB input connectors of the INPUT A/B and DIGITAL RGB connector of the INPUT A comply with the VESA DDC2B. If your computer or graphics board is compatible with DDC, turn on the power of the equipment as follows:
  1 Connect the projector to the computer with the HD D-sub 15-pin cable.
  2 Turn on the power of the projector.
  3 Boot up the computer.

When making connections, be sure to:
- turn off all equipment before making any connections.
- use the proper cables for each connection.
- insert the plugs of the cables properly; plugs that are not fully inserted often generate noise. When pulling out a cable, be sure to pull it out from the plug, not the cable itself.

Notes
- Connect all the connecting cables to the INPUT A connector when you input a signal from the INPUT A connector.
  Connect all the cables to the INPUT B connector when you input a signal from the INPUT B connector as well.
- Supplied mouse cables may not work properly according to your computer.

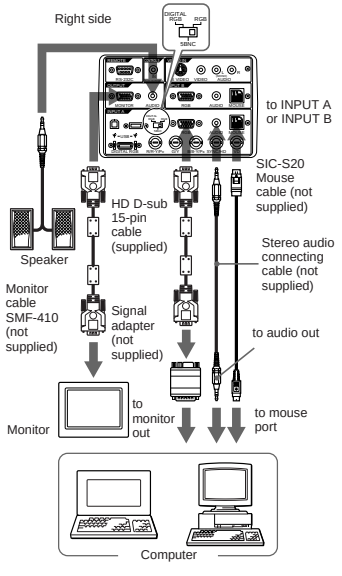
When connecting with an IBM PC/AT compatible computer


Right side
to INPUT A or INPUT B
SIC-S21 (for serial)/S22 (for PS/2) Mouse cable (supplied)
HD D-sub 15-pin cable (supplied)
Speaker
Stereo audio connecting cable (not supplied)
Monitor cable SMF-410 (not supplied)
to monitor out
to audio out
to serial port or to mouse port
Monitor
Computer

Note
Set the DIGITAL RGB/5BNC/RGB switch to RGB (right) when you connect the computer to the INPUT A connector.

1) IBM and PC/AT are a trademark and a registered trademark of International Business Machines Corporation, U.S.A.

When connecting with a Macintosh computer

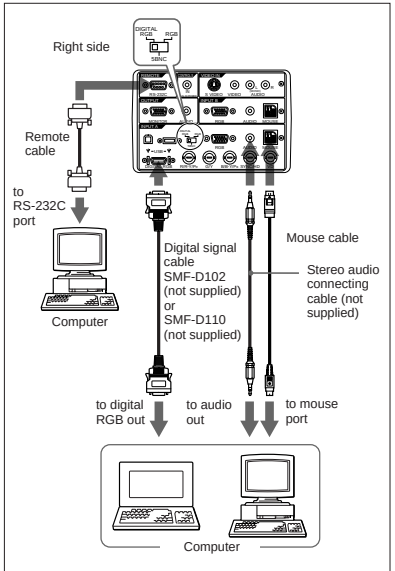


Notes

- Set the DIGITAL RGB/5BNC/RGB switch to RGB (right) when you connect the computer to the INPUT A connector.
- When you connect with a Macintosh computer, you need the optional signal adapter.

Using the DIGITAL RGB (TMDS) connector

Connect the computer to the DIGITAL RGB (TMDS) connector on the connector panel.



Notes

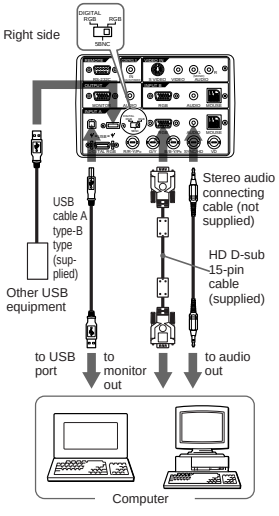
- Use the proper mouse cable for your computer.
- You can use a USB mouse. For details, see "Using USB equipment (e.g., USB mouse)".
- Set the DIGITAL RGB/5BNC/RGB switch to DIGITAL RGB (left).
- To connect digital RGB equipment, use the digital signal cable (SMF-D102 or SMF-D110) (not supplied). Do not use other cables — noise may appear on the image.

Note

If you use the DIGITAL RGB (TMDS) connector, the MONITOR connector will not output image signals.

Using USB equipment (e.g., USB mouse)

Connect the USB equipment to the USB connector on the connector panel.
You can connect your computer to the projector via the RGB connector, 5BNC connector or DIGITAL RGB connector. (The example below uses the RGB connector.)



Note

Set the DIGITAL RGB/5BNC/RGB switch to the suitable position depending on the connection.

On the USB function

When connecting the projector to a computer by using the USB cable for the first time, the computer recognizes the following devices automatically.

1. USB hub (general use)
2. USB human interface device (wireless mouse function)
3. USB human interface device (projector control function)
   The computer also recognizes the device connected to the downstream connector on the projector.

Recommended operating environment

When you use the USB function, connect your computer as illustrated above. This application software and the USB function can be used on a computer loaded with Windows 98, Windows 98 SE or Windows 2000 preinstall models.

Notes

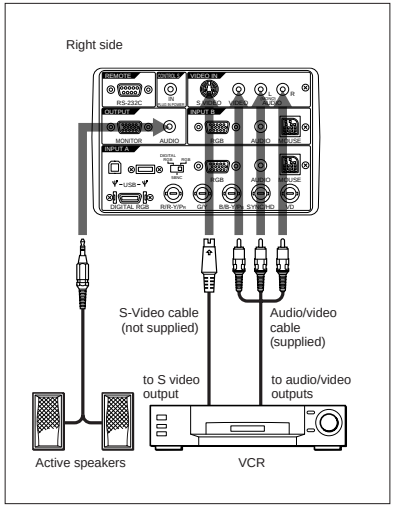
- As the projector recognizes the USB mouse when the computer is connected to the USB connector, do not connect anything to the MOUSE connector.
- Your computer may not start correctly when connected to the projector via the USB cable. In this case, disconnect the USB cable, restart the computer, then connect the computer to the projector using the USB cable.
- This projector is not guaranteed for suspend, standby mode. When you use the projector in suspend, standby mode, disconnect the projector from the USB port on the computer.
- Operations are not guaranteed for all the recommended computer environments.

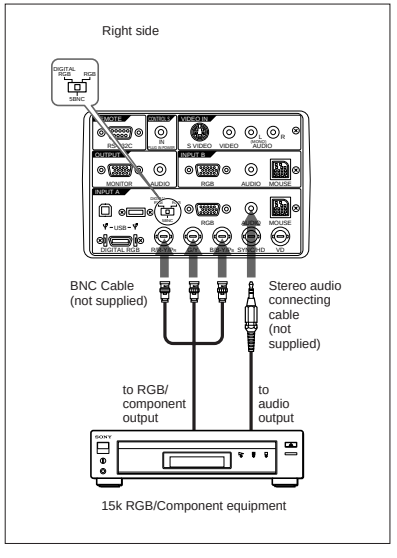
Connecting with a VCR/15k RGB/ Component Equipment

This section describes how to connect the projector with a VCR, external active speakers, and 15k RGB/ component equipment.
Also refer to the instruction manuals of the equipment to be connected.

When making connections, be sure to:

- turn off all equipment before making any connections.
- use the proper cables for each connection.
- insert the plugs of the cables properly; plugs that are not fully inserted often generate noise. When pulling out a cable, be sure to pull it out from the plug, not the cable itself.





Notes

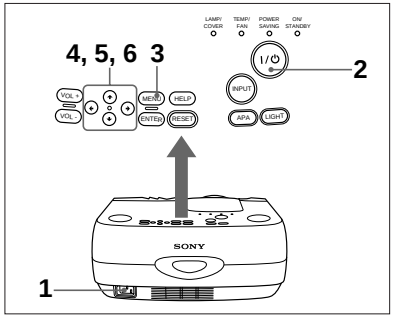
- Set the aspect ratio using ASPECT in the INPUT SETTING menu according to the input signal.
- To connect a 15k RGB/Component equipment, select the COMPUTER/COMPONENT/DTV YPBPR/DTV GBR in the INPUT-A in the SET SETTING menu according to the input signal.
- Use the composite sync signal when you input the external sync signal from 15k RGB/component equipment.

Connecting to a HDTV 1035/60i

Since the screen ratio of a high definition image is 16:9 and 576 lines are displayed in the vertical direction, the image displayed is not a high-definition image.

Selecting the Menu Language

You can select the language for displaying in the menu and other on screen displays. The factory setting is ENGLISH.



1 Plug the AC power cord into the wall outlet.

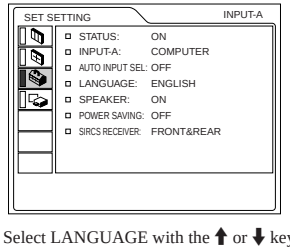
2 Press the I / ⏻ key to turn on the power.

3 Press the MENU key.

The menu display appears.

4 Select the icon of SET SETTING Menu, the third one, with the ↑ or ↓ key, then press the → or ENTER key.

The SET SETTING Menu appears.



5 Select LANGUAGE with the ↑ or ↓ key, then press the → or ENTER key.

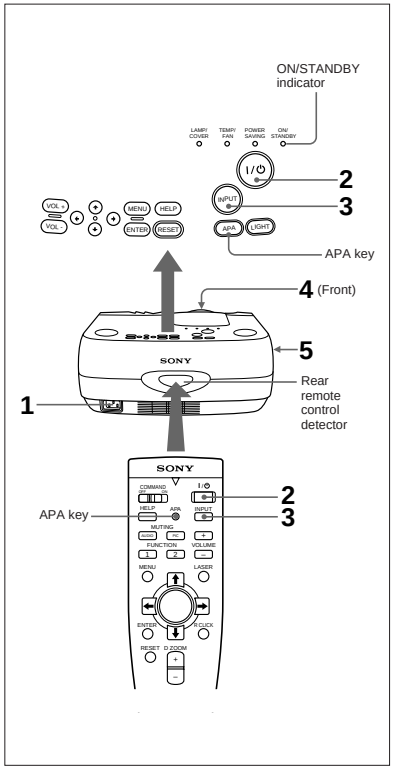
6 Select the language desired with the ↑ or ↓ key, then press the ← or ENTER key.

The menu changes into the selected language .

To clear the menu display

Press the MENU key.
The menu display disappears automatically if no key is pressed for one minute.

Projecting



1 After all equipment is connected completely, plug the AC power cord into the wall outlet.

The ON/STANDBY indicator lights in red and the projector goes into the standby mode.

2 Press the I / ⏻ key.

The ON/STANDBY indicator lights in green.

3 Turn on equipment connected to the projector. Press the INPUT key to select the input source.

INPUT-A: Selects audio and video signals input from the INPUT A connector.

INPUT-B: Selects audio and video signals input from the INPUT B connector.

VIDEO: Selects audio and video signals input from the AUDIO/VIDEO (VIDEO IN) jacks.

S-VIDEO: Selects audio and video signals input from the AUDIO/S VIDEO (VIDEO IN) jacks.

Note

The AUDIO (VIDEO IN) jacks are used as audio outputs of both VIDEO and S-VIDEO.

4 Turn the zoom ring to adjust the size of the picture.

5 Turn the focus ring to adjust the focus.

Note

Looking into the lens when projecting may cause injury to your eyes.

To	Press
Adjust the volume	the VOL +/– keys on the control panel or the VOLUME +/– keys on the Remoter Commander.
Cut off the sound	the AUDIO MUTING key on the Remote Commander. To restore the sound, press the AUDIO MUTING key again or press the VOL + key on the control panel or the VOLUME + key on the Remote Commander.
Cut off the picture	the PIC MUTING key on the Remote Commander. To restore the picture, press the PIC MUTING key again.

To get the clearest picture

You can get the suitable picture when a signal from the computer is input. Press the APA key.
The picture is automatically adjusted to be projected clearest.

Notes

- Adjust the signal when the still picture is displayed on the screen.
- Press the APA key when the full image is displayed on the screen. If there are black edges around the image, the APA function will not function properly and the image may extend beyond the screen.
- If you switch the input signal or re-connect a computer, press the APA key again to get the suitable picture.

• "ADJUSTING" appears on the screen. Press the APA key again during the adjustment to restore the original screen.
• "Complete!" appears on the screen when the picture is adjusted properly. The picture may not be adjusted properly depending on the kinds of input signals.
• Adjust the items in the INPUT SETTING menu when you adjust the picture manually.
For details, see page 24 (GB).

To correct the trapezoid

When the projecting image is a trapezoid, change the projector's position/height by moving the adjuster.
For details on "How to use the adjuster", see page 10 (GB).

If the image is still a trapezoid, correct it in DIGIT KEYSTONE in the INSTALL SETTING menu.

When the base edge is longer than the upper edge as shown in the figure below:

Set the value to negative.

When the upper edge is longer than the base edge as shown in the figure below:

Set the value to positive.

For details on "DIGIT KEYSTONE", see page 27 (GB).

To turn off the power

1 Press the I / ⏻ key.

"Power OFF?" appears on the screen.

Note
The message will disappear if you press any key except the I / ⏻ key, or if you do not press any key for five seconds.

2 Press the I / ⏻ key.

The ON/STANDBY indicator flashes in green and the fan continues to run for about 120 seconds to reduce the internal heat. Also, the ON/STANDBY indicator flashes quickly for the first 40 seconds. During this time, you will not be able to turn the power back on with the I / ⏻ key.

3 Unplug the AC power cord from the wall outlet after the fan stops running and the ON/STANDBY indicator lights in red.

When you cannot confirm the on-screen message
When you cannot confirm the on-screen message in a certain condition, you can turn off the power by holding the I / ⏻ key for about one second.

Note
Do not unplug the AC power cord while the fan is still running; otherwise, the fan will stop although the internal heat is still high, leading to breakdown of the projector.

About the air filter cleaning

Clean the air filter every 300 hours to ensure optimal performance.

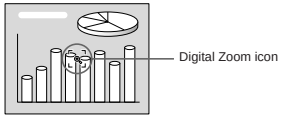
Effective tools for your presentation

To enlarge the image (Digital Zoom function)

You can select a point in the image to enlarge.

1 Press the D ZOOM + key on the Remote Commander.

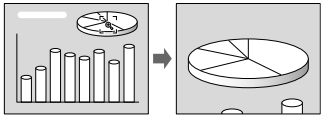
The Digital Zoom icon appears at the center of the image.



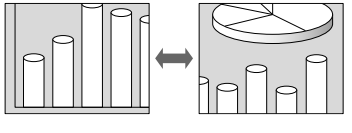
2 Move the icon to the point on the image you want to enlarge. Use the arrow keys (↑/↓/←/→) to move the icon.

3 Press the D ZOOM + key again.

The image where the icon is located is enlarged. By pressing the + key repeatedly, the image size increases. (ratio of enlargement: max. 4 times)



Use the arrow keys(↑/↓/←/→) to scroll the enlarged image.



To return the image back to its original size
Press the D ZOOM – key on the Remote Commander.

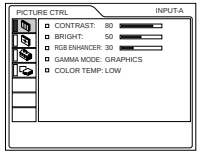
To use the Laser Pointer function

Press the LASER key on the Remote Commander. The laser pointer appears. The pointer is helpful in indicating a particular point on the screen.

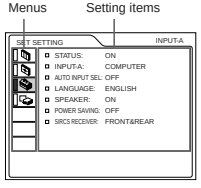
Using the MENU

The projector is equipped with an on-screen menu for making various adjustments and settings.
To select the language used in the menu, see page 26 (GB).

1 Press the MENU key.
The menu display appears.
The bar on the icon of the currently selected menu is highlighted in yellow.



2 Use the ↑ or ↓ key to select a menu, then press the → or ENTER key.
The selected menu appears.



3 Make setting or adjustment on an item.
For details on setting individual items, see the relevant menu pages.

To clear the menu display

Press the MENU key.
The menu display disappears automatically if no key is pressed for one minute.

To reset items that have been adjusted

Press the RESET key.
"Complete!" appears on the screen and the settings appearing on the screen will be reset to their factory preset values.
Items which can be reset are:
- "CONTRAST", "BRIGHT", "COLOR", "HUE", "SHARP" and "RGB ENHANCER" in the PICTURE CTRL menu.
- "DOT PHASE", "SIZE H" and "SHIFT" in the INPUT SETTING menu.

About the memory of the settings

The settings are automatically stored in the projector memory.

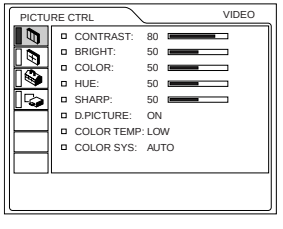
When no signal is input

When there is no input signal, "NO INPUT–Cannot adjust this item." appears on the screen, and each item cannot be adjusted.

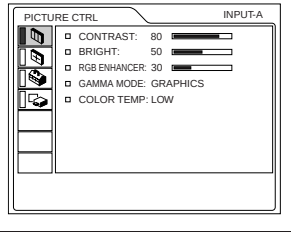
The PICTURE CTRL Menu

The PICTURE CTRL (control) menu is used for adjusting the picture.
Unadjustable items depending on the input signal are not displayed in the menu.

When the video signal is input



When the RGB signal is input



Operation

1. Select an item
Use the ↑ or ↓ key to select the item, then press the → or ENTER key.

2. Adjust an item
- When changing the adjustment level:
  To increase the number, press the ↑ or → key.
  To decrease the number, press the ↓ or ← key.
  Press the ENTER key to restore the original screen.
- When changing the setting:
  Press the ↑ or ↓ key to change the setting.
  Press the ENTER or ← key to restore the original screen.

CONTRAST

Adjusts the picture contrast.
The higher the setting, the greater the contrast.
The lower the setting, the lower the contrast.

BRIGHT

Adjusts the picture brightness.
The higher the setting, the brighter the picture.
The lower the setting, the darker the picture.

COLOR

Adjusts color intensity.
The higher the setting, the greater the intensity.
The lower the setting, the lower the intensity.

HUE

Adjusts color tones.
The higher the setting, the picture becomes greenish.
The lower the setting, the picture becomes purplish.

SHARP

Adjusts the picture sharpness.
The higher the setting, the sharper the picture.
The lower the setting, the softer the picture.

RGB ENHANCER

Adjusts the picture sharpness when the RGB signals are input.
The higher the setting, the sharper the picture.
The lower the setting, the softer the picture.

D. (Dynamic) PICTURE

Emphasizes the black color.
ON: Emphasizes the black color to produce a bolder "dynamic" picture.
OFF: Reproduces the dark portions of the picture accurately, in accordance with the source signal.

GAMMA MODE

Selects a gamma correction curve.
GRAPHICS: Improves the reproduction of half tones. Photos can be reproduced in natural tones.
TEXT: Contrasts black and white. Suitable for images that contain lots of text.

COLOR TEMP

Adjusts the color temperature.
HIGH: Makes the white color bluish.
LOW: Makes the white color reddish.

COLOR SYS (System)

Selects the color system of the input signal.
AUTO: Automatically selects one of the following signals: NTSC 3.58, PAL, SECAM, NTSC4.43.
PAL-M/N: Automatically selects one of the following signals: PAL-M/PAL-N, NTSC3.58.
Normally, set to AUTO.
If the picture is distorted or colorless, select the color system according to the input signal.

Input signals and adjustable/setting items

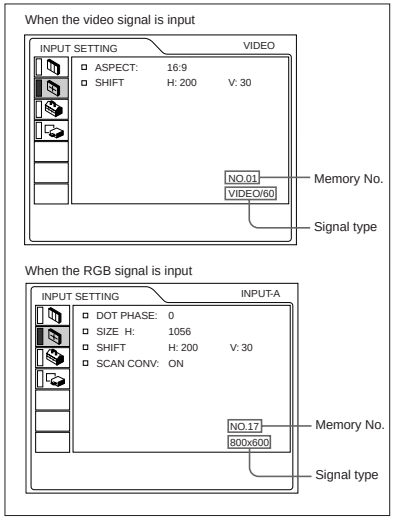
Item	Input signal				
	Video or S video (Y/C)	Compo-nent	HDTV	RGB[1]	B&W
CONTRAST	●	●	●	●	●
BRIGHT	●	●	●	●	●
COLOR	●	●	●	–	–
HUE	● (NTSC3.58/ 4.43 only)	●	●	–	–
SHARP	●	●	●	–	●
RGB ENHANCER	–	–	–	●	–
D. PICTURE	●	● (15k 60/50 only)	–	–	●
GAMMA MODE	–	–	–	●	–
COLOR TEMP	●	●	●	●	●
COLOR SYS	●	–	–	–	●

● : Adjustable/can be set
– : Not adjustable/can not be set

1) The RGB signals of a computer

The INPUT SETTING Menu

The INPUT SETTING menu is used to adjust the input signal.
Unadjustable items depending on the input signal are not displayed in the menu.



Operation

1. Select an item

Use the ↑ or ↓ key to select the item, then press the → or ENTER key.

2. Adjust an item

- When changing the adjustment level:
  To increase the number, press the ↑ or → key.
  To decrease the number, press the ↓ or ← key.
  Press the ENTER key to restore the original screen.
- When changing the setting:
  Press the ↑ or ↓ key to change the setting.
  Press the ENTER or ← key to restore the original screen.

DOT PHASE

Adjusts the dot phase of the LCD panel and the signal input from the INPUT A/B connector. Adjust the picture further for finer picture after the picture is adjusted with pressing the APA key.
Adjust the picture to where it looks clearest.

SIZE H

Adjusts the horizontal size of picture input from the INPUT A/B connector.
The higher the setting, the larger the horizontal size of the picture.
The lower the setting, the smaller the horizontal size of the picture. Adjust the setting according to the dots of the input signal. For details on the suitable value for the preset signals, see page 25 (GB).

SHIFT

Adjusts the position of the picture input from the INPUT A/B connectors or VIDEO IN jacks.
H adjusts the horizontal position of the picture.
V adjusts the vertical position of the picture.
As the setting for H increases, the picture moves to the right, and as the setting decreases, the picture moves to the left.
As the setting for V increases, the picture moves up, and as the setting decreases, the picture moves down.
Use the ← or the → key to adjust the horizontal position and the ↑ and ↓ key for the vertical position.

ASPECT

Sets the aspect ratio of the picture.
When inputting 16:9 (squeezed) signal from equipment such as a DVD player, set to 16:9.

4:3 : When the picture with ratio 4:3 is input.
16:9 : When the picture with ratio 16:9 (squeezed) is input.

SCAN CONV (Scan converter)

Converts the signal to display the picture according to the screen size.

ON: Displays the picture according to the screen size. The picture will lose some clarity.
OFF: Displays the picture while matching one pixel of input picture element to that of the LCD. The picture will be clear but the picture size will be smaller.

Note

When the XGA or SXGA signal is input, this item will not be displayed.

Input signals and adjustable/setting items

Item	Input signal				
	Video or S video (Y/C)	15k RGB/ Component	HDTV	RGB[1]	B&W
DOT PHASE	–	–	●	●	–
SIZE H	–	–	●	●	–
SHIFT	●	●	●	●	●
ASPECT	●	●	–	–	●
SCAN CONV	–	–	–	● (lower than SVGA only)	–

● : Adjustable/can be set
– : Not adjustable/can not be set

About the preset memory No.

This projector has 44 kinds of preset data for input signals (the preset memory). The memory number of the current input signal and the signal type are displayed when the preset signal is input. This projector automatically detects the signal type. When the signal is registered to the preset memory, a suitable picture is displayed on the screen according to the signal type. You can adjust the picture through the INPUT SETTING menu.
This projector also has 20 kinds of user memories for each INPUT-A/B. When an unpreset signal is input for the first time, memory number is displayed as 0. If the input signal is adjusted in the INPUT SETTING menu, the setting via INPUT-A/B is stored. When more than 20 user memories are registered for each INPUT-A/B, the newest memory is automatically stored over the oldest one.

Preset signals

1	Video 60 Hz		15.734	59.940	H-neg V-neg	
2	Video 50 Hz		15.625	50.000	H-neg V-neg	
3	15k RGB/Component 60 Hz		15.734	59.940	S on G/Y	
4	15k RGB/Component 50 Hz		15.625	50.000	or	
5	HDTV		33.750	60.000	Composite sync	
6	640 × 350	VGA mode 1	31.469	70.086	H-pos V-neg	800
7		VGA VESA[2] 85 Hz	37.861	85.080	H-pos V-neg	832
8	640 × 400	PC-9801[3] Normal	24.823	56.416	H-neg V-neg	848
9		VGA mode 2	31.469	70.086	H-neg V-pos	800
10		VGA VESA 85 Hz	37.861	85.080	H-neg V-pos	832
11	640 × 480	VGA mode 3	31.469	59.940	H-neg V-neg	800
12		Macintosh 13"	35.000	66.667	H-neg V-neg	864
13		VGA VESA 72 Hz	37.861	72.809	H-neg V-neg	832
14		VGA VESA 75 Hz	37.500	75.000	H-neg V-neg	840
15		VGA VESA 85 Hz	43.269	85.008	H-neg V-neg	832
16	800 × 600	SVGA VESA 56 Hz	35.156	56.250	H-pos V-pos	1024
17		SVGA VESA 60 Hz	37.879	60.317	H-pos V-pos	1056
18		SVGA VESA 72 Hz	48.077	72.188	H-pos V-pos	1040
19		SVGA VESA 75 Hz	46.875	75.000	H-pos V-pos	1056
20		SVGA VESA 85 Hz	53.674	85.061	H-pos V-pos	1048
21	832 × 624	Macintosh 16"	49.724	74.550	H-neg V-neg	1152
22	1024 × 768	XGA VESA 43 Hz	35.524	43.479	H-pos V-pos	1264
23		XGA VESA 60 Hz	48.363	60.004	H-neg V-neg	1344
24		XGA VESA 70 Hz	56.476	69.955	H-neg V-neg	1328
25		XGA VESA 75 Hz	60.023	75.029	H-pos V-pos	1312
26		XGA VESA 85 Hz	68.677	84.997	H-pos V-pos	1376
27	1152 × 864	SXGA VESA 70 Hz	63.995	70.016	H-pos V-pos	1472
28		SXGA VESA 75 Hz	67.500	75.000	H-pos V-pos	1600
29		SXGA VESA 85 Hz	77.487	85.057	H-pos V-pos	1568
30	1152 × 900	Sunmicro LO	61.795	65.960	H-neg V-neg	1504
31		Sunmicro HI	71.713	76.047	Composite sync	1472
32	1280 × 960	SXGA VESA 60 Hz	60.000	60.000	H-pos V-pos	1800
33		SXGA VESA 75 Hz	75.000	75.000	H-pos V-pos	1728
34	1280 × 1024	SXGA VESA 43 Hz	46.433	43.436	H-pos V-pos	1696
35		SGI-5	53.316	50.062	S on G	1680
36		SXGA VESA 60 Hz	63.974	60.013	H-pos V-pos	1696
37		SXGA VESA 75 Hz	79.976	75.025	H-pos V-pos	1688
38		SXGA VESA 85 Hz	91.146	85.024	H-pos V-pos	1728

43	PC Component 480/60P	480/60P (Double frequency NTSC)	31.470	60.000	S on G	
44	575/50P	575/50P (Double frequency PAL)	31.250	50.000	S on G	
45	1080/50I	1080/50I	28.130	50.000		
46	1080& 1152/60	1080/50I-2	31.250	50.000		
47	720/60P	720/60P	45.000	60.000		
48	720/50P	720/50P	37.500	50.000		

1) The RGB signals of a computer
2) VESA is a registered trademark of Video Electronics Standard Association.
3) PC-98 is a registered trademark of NEC Corporation.

Since the data is recalled from the preset memory about the following signals, you can use these preset data by adjusting SIZE H. Make fine adjustment by adjusting SHIFT.

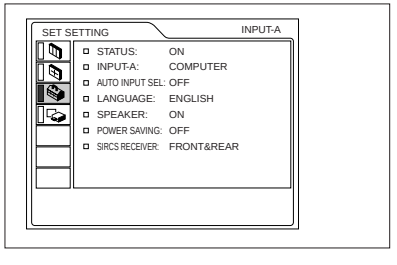
Signal	Memory No.	SIZE H
Super Mac-2	23	1312
SGI-1	23	1320
Macintosh 19"	25	1328
Macintosh 21"	28	1456
Sony News	36	1708
PC-9821 1280 × 1024	36	1600
WS Sunmicro	37	1664

Note

When the aspect ratio of input signal is other than 4:3, a part of the screen is displayed in black.

The SET SETTING Menu

The SET SETTING menu is used for changing the settings of the projector.



Operation

1. Select an item
Use the ↑ or ↓ key to select the item, then press the → or ENTER key.

2. Change the setting
Press the ↑ or ↓ key to change the setting.
To restore the original screen, press the ENTER or ← key.

STATUS (on-screen display)

Sets up the on-screen display.
ON: Shows all of the on-screen displays.
OFF: Turns off the on-screen displays except for the menus, a message when turning off the power, and warning messages.
For details on the warning messages, see page 35 (GB).

INPUT-A

Selects the computer, component, DTV YPBPR or DTV GBR signal input from the 5BNC connector.

Note

If the setting is not correct, "Please check INPUT-A setting." appears on the screen and the color of the picture becomes strange or the picture is not displayed.

AUTO INPUT SEL

When set to ON, the projector detects input signals in the following order: INPUT-A/INPUT-B/VIDEO/S-VIDEO. It indicates the input channel when the power is turned on or the INPUT key is pressed.

LANGUAGE

Selects the language used in the menu and on-screen displays.
Available languages are: English, French, German, Italian, Spanish, Japanese and Chinese.

SPEAKER

Set to OFF to cut off the sound of the internal speakers. When set to OFF, "SPEAKER OFF" appears on the screen when you turn on the power.

POWER SAVING

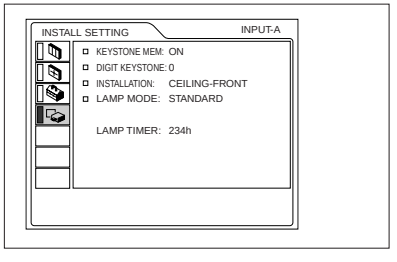
When set to ON, the projector goes into the power saving mode if no signal is input for 10 minutes.

SIRCS RECEIVER

Selects the remote control detectors (SIRCS receiver) on the front and rear of the projector.
FRONT & REAR: Activates both the front and rear detectors.
FRONT: Activates the front detector only.
REAR: Activates the rear detector only.

The INSTALL SETTING Menu

The INSTALL SETTING menu is used for changing the settings of the projector.



Operation

1. Select an item
Use the ↑ or ↓ key to select the item, then press the → or ENTER key.

2. Adjust an item
- When changing the adjustment level:
  To increase the number, press the ↑ or → key.
  To decrease the number, press the ↓ or ← key.
  Press the ENTER key to restore the original screen.
- When changing the setting:
  Press the ↑ or ↓ key to change the setting.
  Press the ENTER or ← key to restore the original screen.

KEYSTONE MEM

ON: DIGIT KEYSTONE setting is stored.
The data is retrieved when the projector power is turned on. The setting will remain the same every time.
OFF: DIGIT KEYSTONE is reset to 0 when the power is turned on next time.

DIGIT KEYSTONE

Corrects the trapezoid caused by the projection angle. If the base edge is longer, set a negative value; if the upper edge is longer, set a positive value to square the image.

INSTALLATION

Sets to reverse the picture horizontally or vertically.

FLOOR-FRONT: The picture is not reversed.
CEILING-FRONT: The picture is reversed horizontally and vertically.
FLOOR-REAR: The picture is reversed horizontally.
CEILING-REAR: The picture is reversed vertically.

Note

In case of using a mirror, be careful of installation since the picture may be reversed.

LAMP MODE

Sets the lamp brightness in the projection.
STANDARD: Illuminates with normal brightness.
LOW: Reduces fan noise and power consumption.

Compared with the STANDARD setting, the brightness of an image projecting under the LOW setting will be low.
If the LAMP MODE is set to LOW, the next time the power is turned on, the lamp will use the STANDARD setting for the first minute, and then go to LOW.

LAMP TIMER

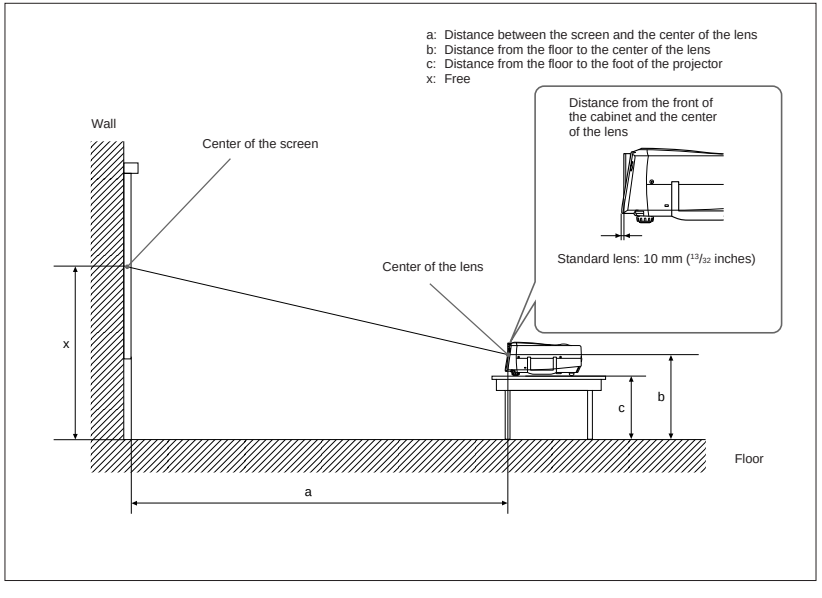
Indicates how long the lamp has been turned on.

Note

This only displays the time. You cannot alter the display.

Installation Examples

Floor Installation


a: Distance between the screen and the center of the lens
b: Distance from the floor to the center of the lens
c: Distance from the floor to the foot of the projector
x: Free
Distance from the front of the cabinet and the center of the lens
Standard lens: 10 mm (13/32 inches)
Wall
Center of the screen
Center of the lens
x
b
c
a
Floor

Unit: mm (inches)

Screen size (inches)		40	60	80	100	120	150	180	200	250	300
a	Minimum	1490 (58 3/4)	2280 (89 7/8)	3060 (120 1/2)	3850 (151 5/8)	4630 (182 3/8)	5810 (228 7/8)	6990 (275 1/4)	7770 (306)	9740 (383 5/8)	11700 (460 3/4)
	Maximum	1820 (71 3/4)	2780 (109 1/2)	3740 (147 3/8)	4700 (185 1/8)	5660 (222 7/8)	7100 (279 5/8)	8540 (336 3/8)	9500 (374 1/8)	11900 (468 5/8)	14300 (563 1/8)
b		x–305 (12)	x–457 (18)	x–610 (24)	x–762 (30)	x–914 (36)	x–1143 (45)	x–1372 (54)	x–1524 (60)	x–1905 (75 1/8)	x–2286 (90 1/8)
c		x–394 (15 5/8)	x–546 (21 5/8)	x–699 (27 5/8)	x–851 (33 5/8)	x–1003 (39 5/8)	x–1232 (48 5/8)	x–1461 (57 5/8)	x–1613 (63 5/8)	x–1994 (78 5/8)	x–2375 (93 5/8)

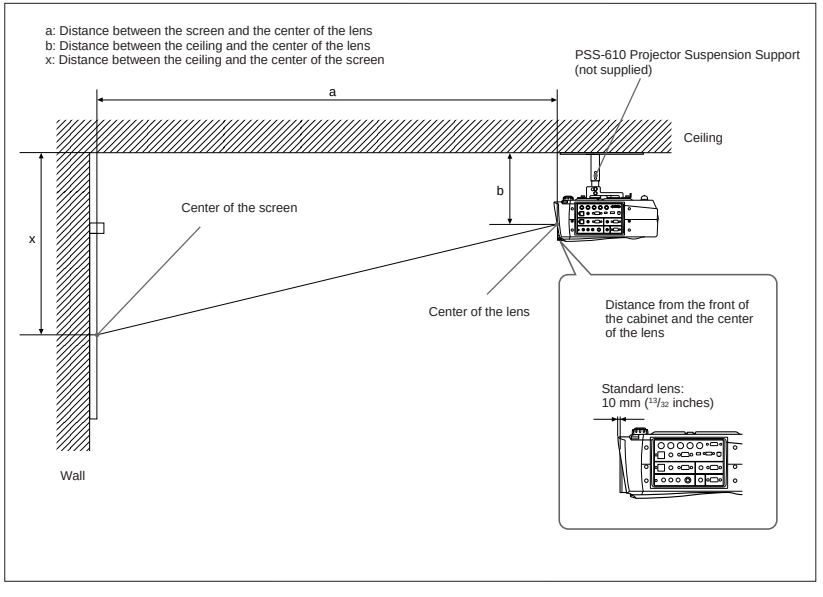
To calculate the installation measurement (unit: mm)

SS: screen size diagonal (inches)
a (minimum) = {(SS × 50.18/1.3102) – 75.10104} × 1.025
a (maximum) = {(SS × 64.518746/1.3102) – 107.8977} × 0.975
b = x – (SS/1.3102 × 9.984)
c = x – (SS/1.3102 × 9.984 + 89)

Ceiling Installation

When installing the projector on the ceiling, use the PSS-610 Projector Suspension Support.

For ceiling installation, consult with qualified Sony personnel.


a: Distance between the screen and the center of the lens
b: Distance between the ceiling and the center of the lens
x: Distance between the ceiling and the center of the screen
PSS-610 Projector Suspension Support (not supplied)
a
Ceiling
b
x
Center of the screen
Center of the lens
Distance from the front of the cabinet and the center of the lens
Standard lens: 10 mm (13/32 inches)
Wall

Unit: mm (inches)

Screen size (inches)		80	100	120	150	180	200	250	300
a	Minimum	3060 (120 1/2)	3850 (151 5/8)	4630 (182 3/8)	5810 (228 7/8)	6990 (275 1/4)	7770 (306)	9740 (383 5/8)	11700 (460 3/4)
	Maximum	3740 (147 3/8)	4700 (185 1/8)	5660 (222 7/8)	7100 (279 5/8)	8540 (336 3/8)	9500 (374 1/8)	11900 (468 5/8)	14300 (563 1/8)
x		b+610 (24)	b+762 (30)	b+914 (36)	b+1143 (45)	b+1372 (54)	b+1524 (60)	b+1905 (75 1/8)	b+2286 (90 1/8)
b		231/256/281/331/356/381 mm (9 1/8/10 1/8/11 1/8/13 1/8/14 1/8/15 inches) adjustable when using PSS-610							

To calculate the installation measurement (unit: mm)

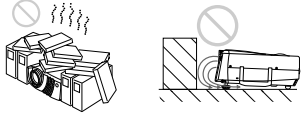
SS: screen size diagonal (inches)
a (minimum) = {(SS × 50.18/1.3102) – 75.10104} × 1.025
a (maximum) = {(SS × 64.518746/1.3102) – 107.8977} × 0.975
x = b + (SS/1.3102 × 9.984)

Notes for Installation

Unsuitable Installation

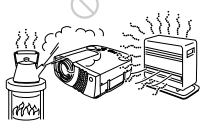
Do not install the projector in the following situations. These installations may cause malfunction or damage to the projector.

Poorly ventilated



- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes. When the internal heat builds up due to the block-up, the temperature sensor will function with the message “High temp.! Lamp off in 1 min.” The power will be turned off automatically after one minute.
- Leave space of more than 30 cm (11 7/8 inches) around the unit.
- Be careful that the ventilation holes may inhale tininess such as a piece of paper.
- If you put something in front of the front ventilation holes, the exhaust may be inhaled into the projector through the ventilation holes at the bottom, causing the internal temperature to rise, which activates the protection circuit. Install the projector so that the exhaust is not blocked.

Highly heated and humid



- Avoid installing the unit in a location where the temperature or humidity is very high, or temperature is very low.
- To avoid moisture condensation, do not install the unit in a location where the temperature may rise rapidly.

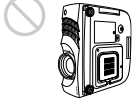
Very dusty

Avoid installing the unit in a location where there is a lot of dust; otherwise, the air filter will be obstructed. The dust blocking the air through the filter may cause raising the internal heat of the projector. Clean it up periodically.

Unsuitable Conditions for Use

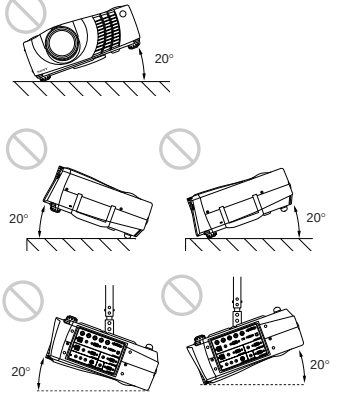
Do not do any of the following.

Toppling of the unit



Avoid using as the unit topples over on its side. It may cause malfunction.

Tilting front/rear and right/left



Avoid using as the unit tilts more than 20 degrees. Do not install the unit other than on the floor or ceiling. These installation may cause malfunction.

Blocking the ventilation holes

Avoid using something to cover over the ventilation holes; otherwise, the internal heat may build up.

http://getMANUAL.com

Maintenance

Notes

- **If the lamp breaks, consult with qualified Sony personnel.**
- Pull out the lamp unit by holding the handle. If you touch the lamp unit, you may be burned or injured.
- When removing the lamp unit, make sure it remains horizontal, then pull straight up. Do not tilt the lamp unit. If you pull out the lamp unit while tilted and if the lamp breaks, the pieces may scatter, causing injury.

Replacing the Lamp

When it is time to replace the lamp, replace the lamp promptly with a new LMP-P201 Projector Lamp. The lamp reaches the end of its life after about 1500 hours for the STANDARD setting, or about 3000 hours for the LOW setting in the LAMP MODE. When it is time to change the lamp, a message which says, “Please replace the LAMP.” will be displayed.

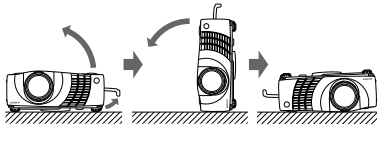
When replacing the lamp after using the projector

Turn off the projector, then unplug the power cord. Wait for at least an hour for the lamp to cool.

Note

The lamp becomes a high temperature after turning off the projector with the I / ⏻ key. If you touch the lamp, you may scald your finger. When you replace the lamp, wait for at least an hour for the lamp to cool.

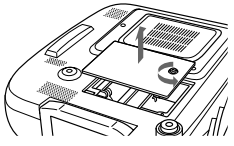
1 Place a protective sheet (cloth) beneath the projector.
Hold the projector handle and turn the projector toward the control panel as shown below.



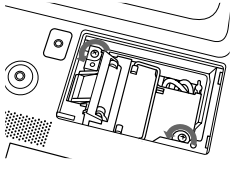
Note

When replacing the lamp, be sure it is on a flat and stable surface.

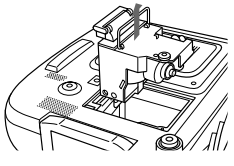
2 Open the lamp cover by loosening one screw with the Philips screwdriver (supplied with the LMP-P201 Projector Lamp).



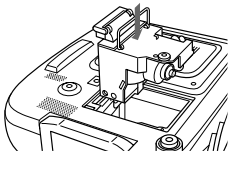
3 Loosen two screws on the lamp unit with the Philips screwdriver.



4 While holding the handle and keeping the lamp unit horizontal, pull straight up.



5 Insert the new lamp all the way in until it is securely in place. Tighten the screws. Fold down the handle.



Notes

- Be careful not to touch the glass surface of the lamp.
- The power will not turn on if the lamp is not secured properly.

6 Close the lamp cover and tighten the screw.

7 Turn the projector back over.

8 Connect the power cord and turn the projector to the standby mode.

9 Press the following keys on the control panel in the following order for less than in five seconds each: RESET, ←, →, ENTER.

Notes

- Be sure to use the LMP-P201 Projector Lamp for replacement. If you use lamps other than LMP-P201, the projector may cause a malfunction.
- Be sure to turn off the projector and unplug the power cord before replacing the lamp.
- Do not put your hands into the lamp replacement spot, or not fall any liquid or object into it to avoid electrical shock or fire.

Disposal of used projector lamp

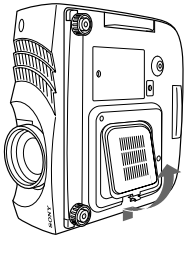
As the materials used in this lamp are similar to those of a fluorescent lamp, you should dispose of a used projector lamp in the same way as a fluorescent lamp.

Cleaning the Air Filter

The air filter should be cleaned every 300 hours.
When it becomes difficult to remove the dust from the filter, replace the filter with a new one.
To clean the air filter, follow the steps below:

1 Turn off the power and unplug the power cord.

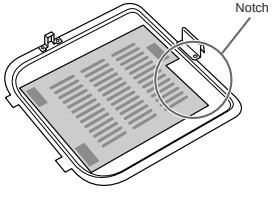
2 Remove the air filter cover while holding down the air filter cover button on the filter cover.



3 Peel off the air filter. (The air filter is secured with Velcro tape (3).)

4 Remove the dust from the filter with a vacuum cleaner.

5 Install the air filter as shown in the figure. Install the air filter cover on the projector.



Notes

- Just placing the air filter on the Velcro tapes will not lock the air filter in place. When installing the air filter, place it on the air filter cover and attach by pressing down hard on the three Velcro tapes. Make sure that the air filter is not bent.
- Set the air filter correctly (straight) in the air filter cover. If the air filter is not straight, the filter may malfunction.
- If the air filter is excessively dirty, wash it with a mild detergent solution and dry it in a shaded place. If the dust cannot be removed, replace the air filter with the supplied new one.
- The air filter has front and back sides. Make sure you install the air filter in the right direction. Check the notch on the filter as shown in the figure above and install properly.
- Be sure to attach the air filter cover firmly; the power will not be turned on if it is not closed securely.

Troubleshooting

If you encounter a problem during operation, press the HELP key to display the help messages.

You can get these kinds of help messages:
• Image: A menu is not displayed. Colors are not correct.
• Sound: Sound is not output correctly.
• Other: The indicator lights up/flashes.

If you still have a problem after consulting the help messages, please check the following. If the problem persists, contact your Sony dealer.

Power

Symptom	Cause	Remedy
The power is not turned on.	The power has been turned off and on with the I / ⏻ key at a short interval.	Wait for about 120 seconds before turning on the power *(see page 19 (GB))*.
	The lamp cover is detached.	Close the lamp cover securely *(see page 32 (GB))*.
	The air filter cover is detached.	Close the air filter cover securely *(see page 33 (GB))*.

Image

Symptom	Cause	Remedy
No picture.	Cable is disconnected or not connected properly.	Check that the proper connections have been made *(see pages 15 (GB) to 18 (GB))*.
	Input selection is incorrect.	Select the input source correctly using the INPUT key *(see page 19 (GB))*.
	The picture is cut off.	Press the PIC MUTING key to release the muting function *(see page 19 (GB))*.
	The computer signal is not set to output to external monitor.	Set the computer signal to output to external monitor *(see page 15 (GB))*.
	The computer signal is set to output to both the LCD of the computer and external monitor.	Set the computer signal to output only to external monitor *(see page 15 (GB))*.
The picture is noisy.	Noise may appear on the background depending on the combination of the numbers of dot input from the connector and numbers of pixel on the LCD panel.	Change the desktop pattern on the connected computer.
On-screen display does not appear.	STATUS in the SET SETTING menu has been set to OFF.	Set STATUS in the SET SETTING menu to ON *(see page 26 (GB))*.

Sound

Symptom	Cause	Remedy
No Sound.	Cable is disconnected or not connected properly.	Check that the proper connections have been made *(see pages 15 (GB) to 18 (GB))*.
	The sound is cut off.	Press the AUDIO MUTING key to release the muting function *(see page 19 (GB))*.
When inputting sound through AUDIO jack, sound comes through one channel only.	Monaural sound is being input through the AUDIO jack.	Input stereo sound.

Others

Symptom	Cause	Remedy
The LAMP/COVER indicator flashes.	The lamp cover or the air filter cover is detached.	Attach the cover securely *(see pages 32 (GB) and 33 (GB))*.
The LAMP/COVER indicator lights up.	The lamp has reached the end of its life.	Replace the lamp *(see page 32 (GB))*.
	The lamp becomes a high temperature.	Wait for 120 seconds to cool down the lamp and turn on the power again *(see page 19 (GB))*.
The TEMP/FAN indicator flashes.	The fan is broken.	Consult with qualified Sony personnel.
The TEMP/FAN indicator lights up.	The internal temperature is unusually high.	Check to see if nothing is blocking the ventilation holes.
Both LAMP/COVER and TEMP/FAN indicators light up.	The electric system failed.	Consult with qualified Sony personnel.

Warning messages

Use the list below to check the meaning of the messages displayed on the screen.

Message	Meaning	Remedy
High temp.! Lamp off in 1 min.	Internal temperature is too high.	Turn off the power. Check to see if nothing is blocking the ventilation holes.
Frequency is out of range!	This input signal cannot be projected as the frequency is out of the acceptable range of the projector.	Input a signal that is within the range of the frequency.
	The resolution setting of the output signal of a computer is too high.	Set the setting of output to the XGA *(see page 15 (GB))*.
Please check INPUT-A setting.	You have input RGB signal from the computer when INPUT-A in the SET SETTING menu is set to COMPONENT, DTV $Y P_B P_R$ or DTV GBR.	Set INPUT-A correctly *(see page 26 (GB))*.
Please replace the LAMP.	It is time to replace the lamp.	Please replace the lamp.

Caution messages

Use the list below to check the meaning of the messages displayed on the screen.

Message	Meaning	Remedy
NO INPUT	No input signal	Check connections *(see page 15 (GB) to 18 (GB))*.
Not applicable!	You have pressed the wrong key.	Press the appropriate key.
SPEAKER OFF	SPEAKER in the SET SETTING menu has been set to OFF.	Set SPEAKER to ON if necessary *(see page 26 (GB))*.

Specifications

Optical characteristics

Projection system	3 LCD panels, 1 lens, projection system
LCD panel	VPL-PX21: 1.3-inch TFT SONY LCD panel VPL-PX31: 1.3-inch TFT SONY LCD panel with micro-lens array, 2,359,296 pixels (1024 × 768 pixels × 3)
Lens	Approx. 1.3 times zoom lens f 50.8 to 64.0 mm/F 1.7 to 2.0
Lamp	200 W UHP
Projection picture size	Range: 40 to 300 inches (diagonal measure)
Light output	VPL-PX21: ANSI lumen[1] 1800 lm VPL-PX31: ANSI lumen[1] 2800 lm
Throwing distance	40-inch: 1490 to 1820 mm (58 3/4 to 71 3/4 inches) 60-inch: 2280 to 2780 mm (89 7/8 to 109 1/2 inches) 80-inch: 3060 to 3740 mm (120 1/2 to 147 3/8 inches) 100-inch: 3850 to 4700 mm (151 5/8 to 185 1/8 inches) 120-inch: 4630 to 5660 mm (182 3/8 to 222 7/8 inches) 150-inch: 5810 to 7100 mm (228 7/8 to 279 5/8 inches) 180-inch: 6990 to 8540 mm (275 1/4 to 336 3/8 inches) 200-inch: 7770 to 9500 mm (306 to 374 1/8 inches) 250-inch: 9740 to 11900 mm (383 5/8 to 468 5/8 inches) 300-inch: 11700 to 14300 mm (460 3/4 to 563 1/8 inches)

Electrical characteristics

Color system	$NTSC_{3.58}$/PAL/SECAM/$NTSC_{4.43}$/PAL-M/PAL-N system, switched automatically/manually
Resolution	750 horizontal TV lines (Video input) 1024 × 768 pixels (RGB input)
Acceptable computer signals	fH: 15 to 91 kHz fV: 43 to 85 Hz
Speaker	Wide frequency range 3 speakers system, Woofer: 65 mm (2 5/8 inches) diameter, max. 3 W Tweeter: 45 mm (1 3/16 inches) diameter, max. 1 W × 2 (stereo)

Input/Output

Video/audio input	VIDEO: phono type Composite video: 1 Vp-p ±2 dB sync negative (75 ohms terminated) S VIDEO: Y/C mini DIN 4-pin type (male) Y (luminance): 1 Vp-p ±2 dB sync negative (75 ohms terminated) C (chrominance): burst 0.286 Vp-p ±2 dB (NTSC) (75 ohms terminated), burst 0.3 Vp-p ±2 dB (PAL) (75 ohms terminated) AUDIO: Phono type × 2 500 mVrms, impedance more than 47 kilohms
INPUT A	HD D-sub15-pin (female)/ 5BNC (female)/ Digital Interface Switched Analog RGB:HD D-sub15-pin (female) R: 0.7 Vp-p ±2 dB (75 ohms terminated) G: 0.7 Vp-p ±2 dB (75 ohms terminated) G with sync: 1 Vp-p ±2 dB sync negative (75 ohms terminated) B: 0.7 Vp-p ±2 dB (75 ohms terminated) SYNC/HD: Composite sync input: 1-5 Vp-p high impedance, positive/ negative Horizontal sync input: 1-5 Vp-p high impedance, positive/ negative VD: Vertical sync input: 1-5 Vp-p high impedance, positive/ negative Analog RGB/component: 5BNC (female) R/R-Y: 0.7 Vp-p ±2 dB (75 ohms terminated) G: 0.7 Vp-p ±2 dB (75 ohms terminated) G with sync/Y: 1 Vp-p ±2 dB sync negative (75 ohms terminated) B/B-Y: 0.7 Vp-p ±2 dB (75 ohms terminated) SYNC/HD: Composite sync input: 1-5 Vp-p high impedance, positive/ negative Horizontal sync input: 1-5 Vp-p high impedance, positive/ negative VD: Vertical sync input: 1-5 Vp-p high impedance, positive/ negative DIGITAL RGB: DFP 20-pin (TMDS) USB HUB: Up (B type: female) × 1, Down (A type: female) × 1 MOUSE (output): 13-pin (female) *(For details, see "Pin assignment" on page 38 (GB).)* AUDIO: Stereo minijack 500 mVrms, impedance more than 47 kilohms
INPUT B	Analog RGB: HD D-sub15-pin (female) R: 0.7 Vp-p ±2 dB (75 ohms terminated) G: 0.7 Vp-p ±2 dB (75 ohms terminated) G with sync: 1 Vp-p ±2 dB sync negative (75 ohms terminated) B: 0.7 Vp-p ±2 dB (75 ohms terminated) SYNC/HD: Composite sync input: 1-5 Vp-p high impedance, positive/ negative Horizontal sync input: 1-5 Vp-p high impedance, positive/ negative VD: Vertical sync input: 1-5 Vp-p high impedance, positive/ negative MOUSE (output): 13-pin (female) *(For details, see "Pin assignment" on page 38 (GB).)* AUDIO: Stereo minijack 500 mVrms, impedance more than 47 kilohms
OUTPUT	MONITOR OUT: HD D-sub 15-pin (female) R/R-Y,G/Y,B/B-Y: Gain Unity,75ohms SYNC/HD,VD: 4Vp-p (open), 1Vp-p (75ohms) * DIGITAL RGB signal is not output from MONITOR OUT terminal. AUDIO OUT (variable out): Stereo minijack max. 1 Vrms, When an input signal is 500 mVrms, impedance less than 5 kilohms
REMOTE	RS-232C: D-sub 9-pin (female)
CONTROL S IN/PLUG IN POWER	Stereo minijack 5Vp-p, plug in power, DC5V
Safety regulations	UL1950, cUL1950, DHHS (Laser), DNHW (Laser), FCC Class A, IC Class A, EN60 950 (NEMKO), CE, C-Tick, EN60 825-1 (Laser), VCCI class B, JEIDA

Laser beam

Laser type	Class 2
Wavelength	645 nm
Output	1 mW

General

Dimensions	339 × 142 × 335 mm (13 3/8 × 5 5/8 × 13 1/4 inches) (w/h/d)
Mass	Approx. 7.2 kg (15 lb 14 oz)
Power requirements	AC 100 to 240 V, 50/60 Hz
Power consumption	Max. 290 W (Standby mode: 5 W)
Heat dissipation	989.6 BTU
Operating temperature	0°C to 40°C (32°F to 104°F)
Operating humidity	35% to 85% (no condensation)
Storage temperature	–20°C to 60°C (32°F to 140°F)
Storage humidity	10% to 90%
Supplied accessories	Remote Commander RM-PJM610 (1) Size AA (R6) batteries (2) HD D-sub 15-pin Cable (1) (1-791-992-11 or 1-757-496-21)

(Continued)

1) ANSI lumen is a measuring method of American National Standard IT 7.228.

Mouse Cable
SIC-S21 (for Serial) (2 m) (1) (1-783-502-11)
SIC-S22 (for PS/2) (2 m) (1) (1-783-501-11)
Audio/video cable (1.5 m) (1) (1-776-279-11)
USB Cable A type – B type (2 m) (1) (1-790-081-11)
Application software, Projector Station Version 2.00 (1)
Lens Cap (1)
Strap for Remote Commander (1)
AC power cord (1)
Air filter (for replacement) (1)
Operating Instructions (1)
Installation Manual for Dealers (1)
Quick Reference Card (1)
Warranty Booklet (1)

Design and specifications are subject to change without notice.

Optional accessories

Projector Lamp LMP-P201 (for replacement)
Projector Suspension Support PSS-610
Carrying Case VLC-600[1)]
Monitor Cable
SMF-400 (HD D-sub 15-pin (male) ⟷ 5 × BNC (male))
SMF-410 (HD D-sub 15-pin (male) ⟷ HD D-sub 15-pin (male))
Signal cable
SMF-402 (HD D-sub 15-pin (male) ⟷ 3 × phono type (male))
Signal Interface Cable
SIC-10 (5 × BNC (male) ⟷ 5 × BNC (male))
Digital Signal Cable
SMF-D102 (DFP 20-pin ⟷ DFP 20-pin)
SMF-D110 (DFP 20-pin ⟷ DFP 20-pin)
Mouse Cable
SIC-S20 (for Macintosh) (2 m)
SIC-S21 (for Serial) (2 m)
SIC-S22 (for PS/2) (2 m)
Signal Adapter
ADP-20 (Macintosh ⟷ HD D-sub 15-pin)

Projection Lens
Long Focus Zoom Lens VPLL-ZM101
Short Focus Zoom Lens VPLL-ZM31
Fixed Short Focus Lens VPLL-FM21

Some of the items may not be available in some areas. For details, please consult your nearest Sony office.

Pin assignment

RGB input connector (HD D-sub 15-pin, female)

1	R	9	N.C.
2	G	10	GND
3	B	11	GND
4	N.C.	12	DDC/SDA
5	GND	13	HD/C.Sync
6	GND (R)	14	VD
7	GND (G)	15	DDC/SCL
8	GND (B)		

MOUSE connector (13-pin, female)

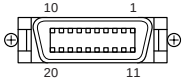
1	RTS	8	R
2	GND	9	98/AT/TXD
3	XA	10	+5V/DTR
4	XB	11	CLOCK
5	YA	12	DATA
6	YB	13	RXD
7	L/PS		

RS-232C connector (D-sub 9-pin, female)

1	DCD	6	DSR
2	RX DA	7	RTS
3	TX DA	8	CTS
4	DTR	9	RI
5	GND		

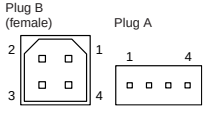
1) VLC-600 may not be available in some areas. For details, please consult your nearest Sony office.

DIGITAL RGB input connector (DFP 20-pin, female)



1	TX0–	11	TXC–
2	TX0+	12	TXC+
3	TX0 SHIELD	13	TXC SHIELD
4	TX2 SHIELD	14	TX1 SHIELD
5	TX2–	15	TX1–
6	TX2+	16	TX1+
7	DDC/SCL	17	NC
8	DDC/SDA	18	SENSE
9	NC	19	+5V DC
10	NC	20	GND

USB connector



1	+5V
2	D–
3	D+
4	GND

Mouse cable pin assignment

SIC-S21

1	RTS	8	R
2	GND	9	98/AT/TXD
3	XA	10	+5V/DTR
4	XB	11	CLOCK
5	YA	12	DATA
6	YB	13	RXD
7	L/PS		

1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

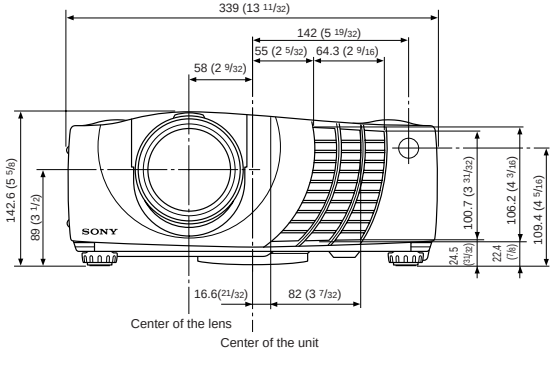
SIC-S22

1	RTS	8	R
2	GND	9	98/AT/TXD
3	XA	10	+5V/DTR
4	XB	11	CLOCK
5	YA	12	DATA
6	YB	13	RXD
7	L/PS		

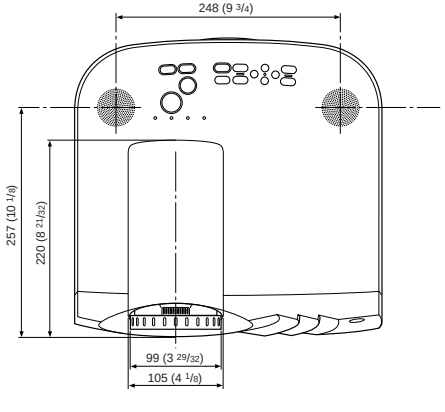
1	DATA
2	NC
3	GND
4	+5V
5	CLOCK
6	NC

Dimensions

Front

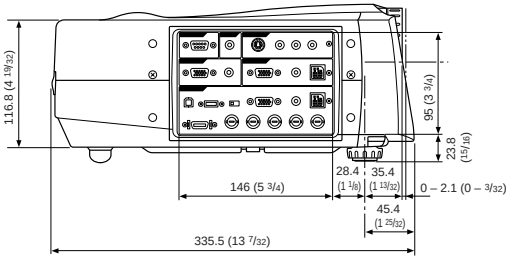


Top

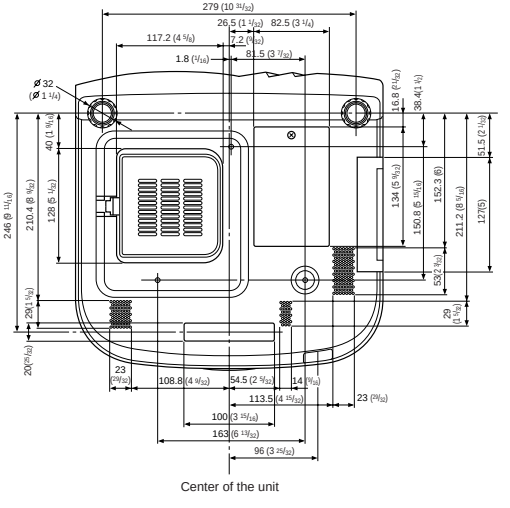


Unit: mm (inches)

Side



Bottom



Unit: mm (inches)

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SONY

4-080-135-**01** (1)

LCD Data Projector

Installation Manual for Dealers **Pages 3, 11 to 16 and 46 to 59**
This installation Manual for Dealers explains how to install the projector. For example, it explains lens replacement, installation measurements when using the optional lens and hanging the projector from the ceiling.

Manuel d’installation pour les revendeurs **Pages 3, 17 à 22 et 46 à 59**
Le manuel d’installation pour les revendeurs explique comment installer le projecteur. Par exemple, il explique la procédure de remplacement de l’objectif, les dimensions d’installation lorsque vous employez l’objectif en option et comment suspendre le projecteur au plafond.

Manual de instalación para proveedores **Páginas 3, 23 a 28 y 46 a 59**
En este manual de instalación para proveedores se describe cómo instalar el proyector. Por ejemplo, se describe cómo sustituir el objetivo, las medidas de instalación cuando se utiliza el objetivo opcional y cómo colgar el proyector en el techo.

Installationsanleitung für Händler **Seite 3, 29 bis 34 und 46 bis 59**
In dieser Installationsanleitung für Händler wird erläutert, wie Sie den Projektor installieren. Beispielsweise werden das Austauschen des Objektivs, die Installationsabmessungen beim Verwenden des gesondert erhältlichen Objektivs und das Installieren des Projektors an der Decke beschrieben.

Manuale d’installazione per i rivenditori **Pagine 3, 35 a 40 e 46 a 59**
Il presente manuale contiene le istruzioni relative all’installazione del proiettore. Vengono riportate ad esempio le istruzioni su come sostituire l’obiettivo, le misure di installazione quando si utilizza l’obiettivo opzionale e le procedure dell’installazione al soffitto.

Installation Manual for Dealers **Pages 3, 41 to 45 and 60 to 64**
This installation Manual for Dealers explains how to install the projector. For example, it explains lens replacement, installation measurements when using the optional lens and hanging the projector from the ceiling.

VPL-PX21
VPL-PX31

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English

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English

Precautions

On safety

- Check that the operating voltage of your unit is identical with the voltage of your local power supply. If voltage adaptation is required, consult with qualified Sony personnel.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified Sony personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- The wall outlet should be near the unit and easily accessible.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Do not look into the lens while the lamp is on.
- Do not place your hand or objects near the ventilation holes — the air coming out is hot.
- Avoid using an extension cord with a low voltage limited since it may cause the short-circuit and physical incidents.
- To carry the projector, be sure to use the carrying handle. Do not hold other parts of the projector, especially the lens, nor catch your finger between the handle, floor, and the projector.
- Do not catch your finger between the unit and surface of the floor when moving the projector installed on the floor.
- Be careful not to catch your finger in the cooling fan.
- Do not carry the projector with the cabinet on and with its cover open.

On installation

- When the projector is mounted on the ceiling, the Sony PSS-610 Projector Suspension Support must be used for installation.
- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes. Leave space of more than 30 cm (11 7/8 inches) between the wall and the projector. Be aware that room heat rises to the ceiling; check that the temperature near the installation location is not excessive.
- Install the projector on the floor or ceiling. Any other installation causes a mulfunction such as color irregularity or shortening lamp life.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity, mechanical vibration or shock.
- To avoid moisture condensation, do not install the unit in a location where the temperature may rise rapidly.
- Be sure to secure the cabinet cover firmly when installing to the ceiling firmly.

On illumination

- To obtain the best picture, the front of the screen should not be exposed to direct lighting or sunlight.
- Ceiling-mounted spot lighting is recommended. Use a cover over fluorescent lamps to avoid lowering the contrast ratio.
- Cover any windows that face the screen with opaque draperies.
- It is desirable to install the projector in a room where floor and walls are not of light-reflecting material. If the floor and walls are of reflecting material, it is recommended that the carpet and wall paper be changed to a dark color.

On preventing internal heat build-up

- After you turn off the power with the I / ⏻ key on the control panel or on the Remote Commander, do not disconnect the unit from the wall outlet while the cooling fan is still running.
- Do not disconnect the AC power cord from the wall outlet while the fan is still running.

Caution

The projector is equipped with ventilation holes (intake) at the bottom and ventilation holes (exhaust) at the front. Do not block or place anything near these holes, or internal heat build-up may occur, causing picture degradation or damage to the projector.

On cleaning

- To keep the cabinet looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents, such as thinner, benzene, or abrasive cleansers, since these will damage the cabinet.
- Avoid touching the lens. To remove dust on the lens, use a soft dry cloth. Do not use a damp cloth, detergent solution, or thinner.
- Clean the filter at regular intervals.

On repacking

- Save the original shipping carton and packing material; they will come in handy if you ever have to ship your unit. For maximum protection, repack your unit as it was originally packed at the factory.

Overview

This manual describes how to install the Sony LCD Data Projector VPL-PX21/PX31, how to replace the lens, how to change the lens position for rear projection (optical axis angle: 0 degree), and installation diagrams. When you replace the lens or change the lens position, also refer to the Operating Instructions.

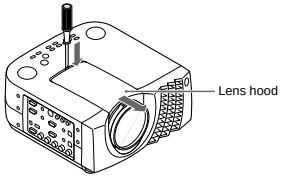
Replacing the Lens

You can install the following two types of lenses in the projector.
- VPLL-ZM101 Long Focus Zoom Lens
- VPLL-ZM31 Short Focus Zoom Lens

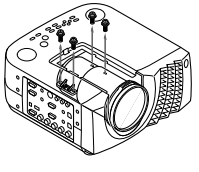
Follow the steps below to replace the lens.
For details on replacing the lens, also refer to the installation manual supplied with the lens.

1 Turn off the power and disconnect the power cable.

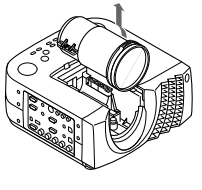
2 Remove the lens hood. To remove the lens hood, insert a screwdriver into the lens hood slit then lightly push down on the hood with the screwdriver and slide the lens hood forward.



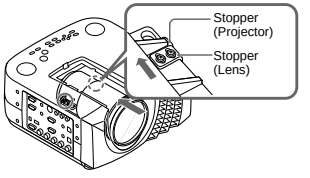
3 Remove the four screws (M4×12, with washers) locking the lens by using a Philips screwdriver.



4 Lift and remove the lens.



5 Install the lens with the lens stopper and the projector stopper met at their edges.

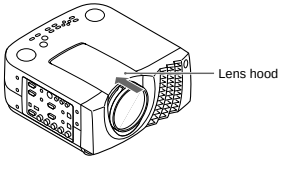


Note

For ease in identification when you install the lens, make sure that the label on the lens is facing up.

6 Tighten the four screws to secure the replacement lens firmly.

7 Install the lens hood by sliding it from front to back until it snaps into the lock position.



Notes

- The lens scratches easily, so when handling it, always place it gently on a stable and level surface in a horizontal position.
- Avoid touching the lens surface.

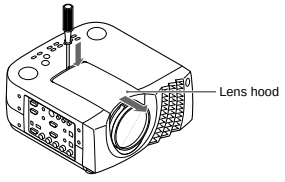
http://getMANUAL.com

Changing the Lens Position for Rear Projection (Optical Axis Angle: 0 degree)

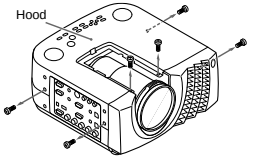
For rear projection, you can set the optical axis angle to 0 (zero). In this case, you will need to set the lens position as follows.
You can install the following types of lenses for a zero optical axis angle.
- Standard lens
- VPLL-ZM101 Long Focus Zoom Lens
- VPLL-ZM31 Short Focus Zoom Lens
- VPLL-FM21 Fixed Short Focus Lens

1 Turn off the power and disconnect the power cable.

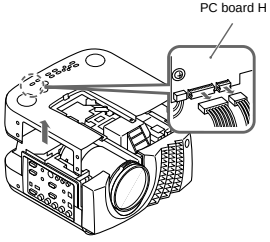
2 Remove the lens hood. To remove the lens hood, insert a screwdriver into the lens hood slit then lightly push down on the hood with the screwdriver and slide the lens hood forward.



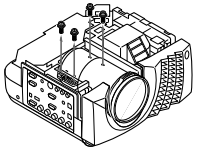
3 Remove the four silver screws (M3×8) on the both sides and two silver screws (M3×8) on the top locking the hood.



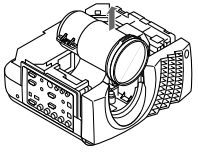
4 Disconnect the 12-pin connector and 4-pin connector (connected to the PC board H) from the hood. Lift the hood and set it behind the unit.



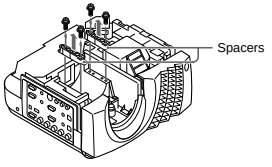
5 Remove the lens hood locking the lens by loosening the four screws (M4×12, with washers) with a Philips screwdriver.



6 Lift and remove the lens.



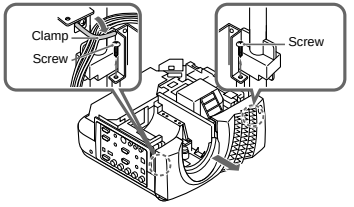
7 Remove the left and right spacers by loosening the four screws (M4×12, with washers).



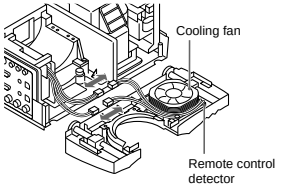
Note

The spacer and the screws may be needed later on. Store them.

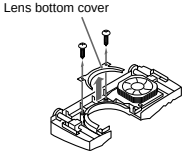
8 Remove two screws (M3×6, with washers) that lock the front panel. Free the wires from the clamp.



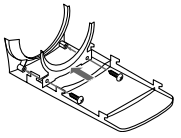
9 Disconnect the two connectors on the back of the front panel, one for cooling fan and the other for remote control detector, and then remove the front panel.



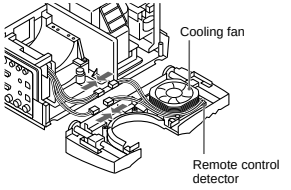
10 Remove the two screws (M3×6, with washers) from the front panel. Remove the lens bottom cover.



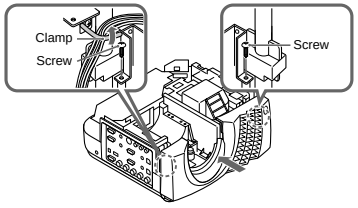
11 Install the lens bottom cover on the lens hood (removed in Step **2**) with the two screws.



12 Connect the connector for remote control detector and the connector for cooling fan.



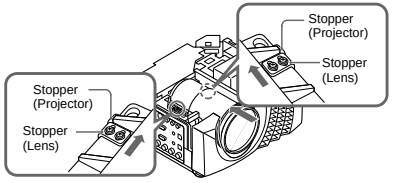
13 Install the front panel on the unit with the two screws (M3×6, with washers). Fasten the wires with the clamp.



14 Install the lens with the lens stopper and the projector stopper met at their edges.

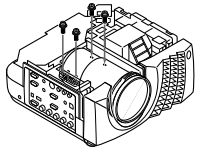
Notes

- Make sure that lens stoppers and projector stoppers are met on both sides.
- For ease in identification when you install the lens, make sure that the lens stopper is facing up.

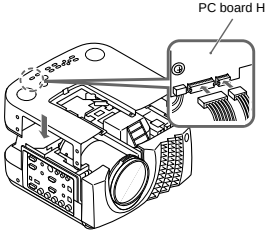


(continued)

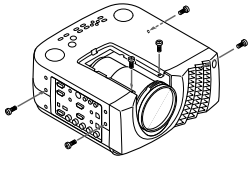
15 Lock the lens by tightening the four screws (M4×12, with washers).



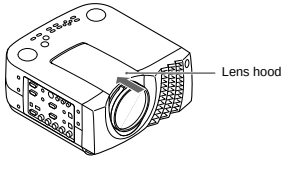
16 Connect the 12-pin connector and 4-pin connector to the PC board H (disconnected in Step **4**).



17 Install the hood and lock with the six screws (M3×8).



18 Install the lens hood by sliding it from front to back until it snaps into position.



English

Installation Diagram

Floor Installation (Front Projection)

Français

Schéma d'installation

Installation au sol (projection frontale)

Español

Diagrama de instalación

Instalación en el suelo (proyección frontal)

Deutsch

Installations-diagramm

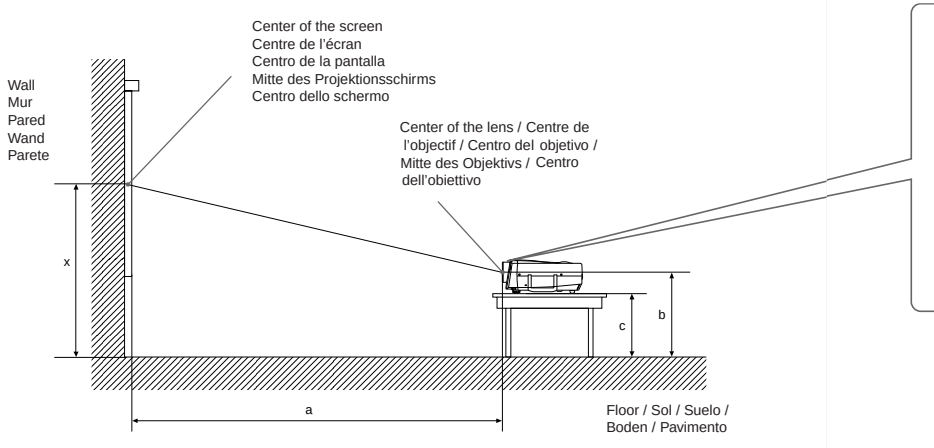
Installation am Boden (Frontprojektion)

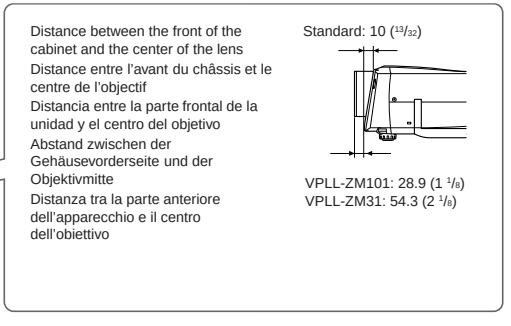
Italiano

Diagramma di installazione

Installazione sul pavimento (proiezione frontale)

A




Distance between the front of the cabinet and the center of the lens
Distance entre l'avant du châssis et le centre de l'objectif
Distancia entre la parte frontal de la unidad y el centro del objetivo
Abstand zwischen der Gehäusevorderseite und der Objektivmitte
Distanza tra la parte anteriore dell'apparecchio e il centro dell'obiettivo
Standard: 10 (13/32)
VPLL-ZM101: 28.9 (1 1/8)
VPLL-ZM31: 54.3 (2 1/8)

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

This section describes the examples for installing the projector on the desk, etc. **A**

See the charts on pages 48 and 49 concerning the installation measurements.

The alphabetical letters in the illustration indicate the distances below.

a : distance between the screen and the center of the lens
b : distance between the floor and the center of the lens
c : distance between the floor and the bottom of the adjusters of the projector
x : free

Cette section décrit des exemples d'installation du projecteur sur un bureau, etc. **A**

Reportez-vous aux tableaux des pages 48 à 49 sur les mesures d'installation.

Les caractères alphabétiques dans l'illustration indiquent les distances ci-dessous.

a : distance entre l'écran et le centre de l'objectif
b : distance entre le sol et le centre de l'objectif
c : distance entre le sol et la base des pieds réglables du projecteur
x : libre

En esta sección se muestran ejemplos para instalar el proyector sobre una mesa, etc. **A**

Consulte las tablas de las páginas 48 a 49 en relación con las medidas de instalación.

Las letras alfabéticas de la ilustración indican las distancias mostradas a continuación.

a : distancia entre la pantalla y el centro del objetivo
b : distancia entre el suelo y el centro del objetivo
c : distancia entre el suelo y la base de los ajustadores del proyector
x : libre

In diesem Abschnitt finden Sie Beispiele für das Installieren des Projektors auf einem Tisch usw. **A**

In den Tabellen auf Seite 48 bis 49 finden Sie die Installationsabmessungen.

Die Buchstaben in der Abbildung beziehen sich auf die unten beschriebenen Abstände.

a : Abstand zwischen dem Projektionsschirm und der Mitte des Objektivs
b : Abstand zwischen dem Boden und der Mitte des Objektivs
c : Abstand zwischen dem Boden und der Unterseite der Ausgleichsfüße des Projektors
x : frei

Questa sezione descrive gli esempi di installazione del proiettore su un tavolo, ecc. **A**

Vedere i diagrammi da pagina 48 a pagina 49 relativi alle misure di installazione.

Le lettere nell'illustrazione indicano le distanze descritte di seguito.

a : distanza fra lo schermo e il centro dell'obiettivo
b : distanza tra il pavimento e il centro dell'obiettivo
c : distanza fra il pavimento e la base dei dispositivi di regolazione del proiettore
x : libero

English

Installation Diagram

Floor Installation (Front Projection)

Français

Schéma d’installation

Installation au sol (projection frontale)

Español

Diagrama de instalación

Instalación en el suelo (proyección frontal)

Deutsch

Installations-diagramm

Installation am Boden (Frontprojektion)

Italiano

Diagramma di installazione

Installazione sul pavimento (proiezione frontale)

■ VPLL-ZM101

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

SS		40	60	80	100	120	150	180	200	250	300
a	N	2600 (102 3/8)	4000 (157 1/2)	5410 (213 1/8)	6810 (268 1/4)	8220 (323 3/4)	10330 (406 3/4)	12430 (489 1/2)	13840 (545)	17350 (683 1/4)	20870 (821 7/8)
	M	3890 (153 1/4)	5940 (234)	7980 (314 1/4)	10030 (394 15/16)	12080 (475 3/4)	15150 (596 5/8)	18220 (717 1/2)	20270 (798 1/4)	25380 (999 3/8)	30500 (1201)
b		x–305 (12)	x–457 (18)	x–610 (24)	x–762 (30)	x–914 (36)	x–1143 (45)	x–1372 (54)	x–1524 (60)	x–1905 (75 1/8)	x–2286 (90 1/8)
c		x–394 (15 5/8)	x–546 (21 5/8)	x–699 (27 5/8)	x–851 (33 5/8)	x–1003 (39 5/8)	x–1232 (48 5/8)	x–1461 (57 5/8)	x–1613 (63 5/8)	x–1994 (78 5/8)	x–2375 (93 5/8)

a (N) = {(SS × 89.82/1.3102) – 209.2626} × 1.025
a (M) = {(SS × 137.56012/1.3102) – 211.5915} × 0.975
b = x – (SS/1.3102 × 9.984)
c = x – (SS/1.3102 × 9.984 + 89)

The installation measurements and their calculation method for each lens are shown above.

The alphabetical letters in the charts and calculation methods indicate the following.
SS : screen size measured diagonally (inches)
a : distance between the screen and the center of the lens
b : distance between the floor and the center of the lens
c : distance between the floor and the bottom of the adjusters of the projector
x : free
N : minimum
M : maximum

Les mesures d’installation et leur méthode de calcul pour chaque objectif sont indiquées ci-dessus.

Les caractères alphabétiques dans l’illustration indiquent ce qui suit.
SS : dimension de l’écran en diagonale (pouces)
a : distance entre l’écran et le centre de l’objectif
b : distance entre le sol et le centre de l’objectif
c : distance entre le sol et la base des pieds réglables du projecteur
x : libre
N : minimum
M : maximum

■ VPLL-ZM31

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

SS		40	60	80	100	120	150	180	200	250	300
a	N	1190 (46 7/8)	1840 (72 1/2)	2490 (98 1/8)	3150 (124 1/8)	3800 (149 5/8)	4780 (188 1/4)	5760 (226 7/8)	6410 (252 1/2)	8050 (317)	9680 (381 1/4)
	M	1250 (49 1/4)	1940 (76 1/2)	2620 (103 1/4)	3300 (130)	3980 (156 3/4)	5000 (196 7/8)	6030 (237 7/16)	6710 (264 1/4)	8410 (331 1/4)	10120 (398 1/2)
b		x–305 (12)	x–457 (18)	x–610 (24)	x–762 (30)	x–914 (36)	x–1143 (45)	x–1372 (54)	x–1524 (60)	x–1905 (75 1/8)	x–2286 (90 1/8)
c		x–394 (15 5/8)	x–546 (21 5/8)	x–699 (27 5/8)	x–851 (33 5/8)	x–1003 (39 5/8)	x–1232 (48 5/8)	x–1461 (57 5/8)	x–1613 (63 5/8)	x–1994 (78 5/8)	x–2375 (93 5/8)

a (N) = {(SS × 41.75/1.3102) – 116.2604} × 1.025
a (M) = {(SS × 45.821033/1.3102) – 112.9154} × 0.975
b = x – (SS/1.3102 × 9.984)
c = x – (SS/1.3102 × 9.984 + 89)

Las medidas de instalación y sus métodos de cálculo para cada objetivo se muestran anteriormente.

Las letras alfabéticas de las tablas y los métodos de cálculo indican lo siguiente.
SS : tamaño de pantalla medida diagonalmente (pulgadas)
a : distancia entre la pantalla y el centro del objetivo
b : distancia entre el suelo y el centro del objetivo
c : distancia entre el suelo y la base de los ajustadores del proyector
x : libre
N : mínimo
M : máximo

Die Installationsabmessungen und das jeweilige Berechnungsverfahren für die einzelnen Objektive sind oben angegeben.

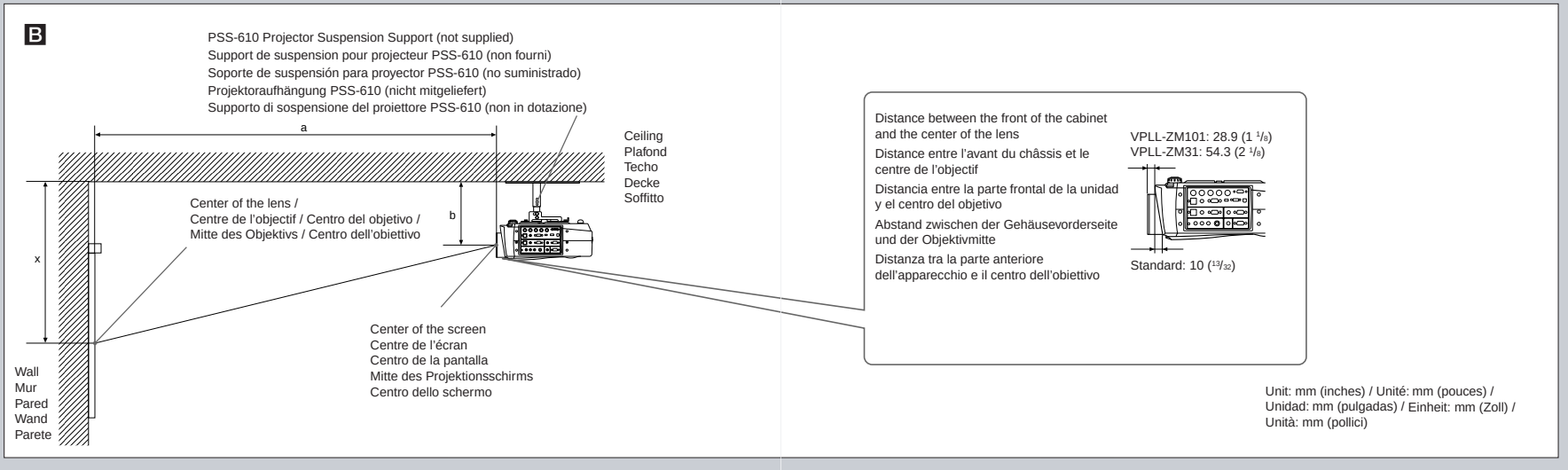
Die Buchstaben in den Tabellen und den Berechnungsverfahren haben folgende Bedeutung:
SS : Projektionsschirmgröße in Zoll, diagonal gemessen
a : Abstand zwischen dem Projektionsschirm und der Mitte des Objektivs
b : Abstand zwischen dem Boden und der Mitte des Objektivs
c : Abstand zwischen dem Boden und der Unterseite der Ausgleichsfüße des Projektors
x : frei
N : Mindestens
M : Höchstenss

Le misure di installazione e il loro metodo di calcolo per ogni obiettivo sono mostrati qui sopra.

Le lettere nei diagrammi e i metodi di calcolo indicano quanto segue.
SS : dimensione schermo misurata diagonalmente (pollici)
a : distanza fra lo schermo e il centro dell’obiettivo
b : distanza tra il pavimento e il centro dell’obiettivo
c : distanza fra il pavimento e la base dei dispositivi di regolazione del proiettore
x : libero
N : Minima
M : Massima

English

Ceiling Installation (Front Projection)


B
PSS-610 Projector Suspension Support (not supplied)
Support de suspension pour projecteur PSS-610 (non fourni)
Soporte de suspensión para proyector PSS-610 (no suministrado)
Projektoraufhängung PSS-610 (nicht mitgeliefert)
Supporto di sospensione del proiettore PSS-610 (non in dotazione)
a
Ceiling
Plafond
Techo
Decke
Soffitto
Center of the lens /
Centre de l'objectif / Centro del objetivo /
Mitte des Objektivs / Centro dell'obiettivo
b
x
Center of the screen
Centre de l'écran
Centro de la pantalla
Mitte des Projektionsschirms
Centro dello schermo
Wall
Mur
Pared
Wand
Parete
Distance between the front of the cabinet and the center of the lens
Distance entre l'avant du châssis et le centre de l'objectif
Distancia entre la parte frontal de la unidad y el centro del objetivo
Abstand zwischen der Gehäusevorderseite und der Objektivmitte
Distanza tra la parte anteriore dell'apparecchio e il centro dell'obiettivo
VPLL-ZM101: 28.9 (1 1/8)
VPLL-ZM31: 54.3 (2 1/8)
Standard: 10 (13/32)
Unit: mm (inches) / Unité: mm (pouces) /
Unidad: mm (pulgadas) / Einheit: mm (Zoll) /
Unità: mm (pollici)

This section describes the examples for installing the projector on the ceiling.

B

When installing the projector on the ceiling, use the PSS-610 Projector Suspension Support.
For ceiling installation, ask for qualified Sony personnel only.

See the charts on pages 52 to 53 concerning the installation measurements.

The alphabetical letters in the illustration indicate the distances below.

a : Distance between the screen and the center of the lens
b : Distance between the ceiling and the center of the lens
x : Distance between the ceiling and the center of the screen

Français

Installation au platfond (projection frontale)

Cette section décrit des exemples d'installation du projecteur au plafond.

B

Lorsque vous installez le projecteur au plafond, utilisez le support de suspension pour projecteur PSS-610. Pour une installation au plafond, adressez-vous uniquement à un personnel qualifié Sony.

Reportez-vous aux tableaux des pages 52 à 53 sur les mesures d'installation.

Les caractères alphabétiques dans l'illustration indiquent les distances ci-dessous.

a : distance entre l'écran et le centre de l'objectif
b : distance entre le plafond et le centre de l'objectif
x : distance entre le plafond et le centre de l'écran

Español

Instalación en el techo (proyección frontal)

En esta sección se muestran ejemplos para instalar el proyector en el techo. **B**

Para instalar el proyector en el techo, utilice el soporte de suspensión para proyector PSS-610.
Para realizar la instalación en el techo, solicite asistencia técnica únicamente a personal especializado de Sony.

Consulte las tablas de las páginas 52 a 53 en relación con las medidas de instalación.

Las letras alfabéticas de la ilustración indican las distancias mostradas a continuación.

a : distancia entre la pantalla y el centro del objetivo
b : distancia entre el techo y el centro del objetivo
x : distancia entre el techo y el centro de la pantalla

Deutsch

Installation an der Decke (Frontprojektion)

In diesem Abschnitt finden Sie Beispiele für das Installieren des Projektors an der Decke. **B**

Zur Installation des Projektors an der Decke benötigen Sie die Projektoraufhängung PSS-610.
Wenn Sie das Gerät an der Decke montieren wollen, wenden Sie sich bitte an qualifiziertes Sony-Personal.

In den Tabellen auf Seite 52 bis 53 finden Sie die Installationsabmessungen.

Die Buchstaben in der Abbildung beziehen sich auf die unten beschriebenen Abstände.

a : Abstand zwischen dem Projektionsschirm und der Mitte des Objektivs
b : Abstand zwischen der Decke und der Mitte des Objektivs
x : Abstand zwischen der Decke und der Mitte des Projektionsschirms

Italiano

Installazione sul soffitto (proiezione frontale)

Questa sezione descrive gli esempi di installazione al soffitto del proiettore.

B

Quando viene installato il proiettore sul soffitto utilizzare il supporto di sospensione del proiettore PSS-610. Per l'installazione al soffitto, rivolgersi esclusivamente a personale qualificato Sony.

Vedere i diagrammi da pagina 52 a pagina 53 relative alle misure di installazione.

Le lettere nell'illustrazione indicano le distanze descritte di seguito.

a : distanza tra lo schermo e il centro dell'obiettivo
b : distanza tra il soffitto e il centro dell'obiettivo
x : distanza tra il soffitto e il centro dello schermo

English

Ceiling Installation (Front Projection)

■ VPLL-ZM101

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

SS		80	100	120	150	180	200	250	300
a	N	5410 (213 3/8)	6810 (268 1/4)	8220 (323 3/4)	10330 (406 3/4)	12430 (489 1/2)	13840 (545)	17350 (683 1/4)	20870 (821 7/8)
	M	7980 (314 3/4)	10030 (394 15/16)	12080 (475 3/4)	15150 (596 5/8)	18220 (717 1/2)	20270 (798 1/4)	25380 (999 3/8)	30500 (1201)
x		b+610 (24)	b+762 (30)	b+914 (36)	b+1143 (45)	b+1372 (54)	b+1524 (60)	b+1905 (75 1/8)	b+2286 (90 1/8)
b		P							

a (N) = {(SS × 89.82/1.3102) – 209.2626} × 1.025
a (M) = {(SS × 137.56012/1.3102) – 211.5915} × 0.975
x = b + (SS/1.3102 × 9.984)

The installation measurements and their calculation method for each lens are shown above.

The alphabetical letters in the charts and calculation methods indicate the following.

SS : screen size measured diagonally (inches)
a : Distance between the screen and the center of the lens
b : Distance between the ceiling and the center of the lens
x : Distance between the ceiling and the center of the screen
N : minimum
M : maximum
P : 231, 256, 281, 331, 356, 381 mm (9 1/8, 10 1/8, 11 1/8, 13 1/8, 14 1/8, 15 inches) adjustable when using PSS-610

Français

Installation au platfond (projection frontale)

Les mesures d'installation et leur méthode de calcul pour chaque objectif sont indiquées ci-dessus.

Les caractères alphabétiques dans l'illustration indiquent ce qui suit.

SS : dimension de l'écran en diagonale (pouces)
a : distance entre l'écran et le centre de l'objectif
b : distance entre le plafond et le centre de l'objectif
x : distance entre le plafond et le centre de l'écran
N : minimum
M : maximum
P : Si vous utilisez le PSS-610, la hauteur peut être réglée à 231, 256, 281, 331, 356, 381 mm (9 1/8, 10 1/8, 11 1/8, 13 1/8, 14 1/8, 15 pouces).

Español

Instalación en el techo (proyección frontal)

■ VPLL-ZM31

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

SS		80	100	120	150	180	200	250	300
a	N	2490 (98 1/8)	3150 (124 1/8)	3800 (149 5/8)	4780 (188 1/4)	5760 (226 7/8)	6410 (252 1/2)	8050 (317)	9680 (381 1/4)
	M	2620 (103 1/4)	3300 (130)	3980 (156 3/4)	5000 (196 7/8)	6030 (237 7/16)	6710 (264 1/4)	8410 (331 1/4)	10120 (398 1/2)
x		b+610 (24)	b+762 (30)	b+914 (36)	b+1143 (45)	b+1372 (54)	b+1524 (60)	b+1905 (75 1/8)	b+2286 (90 1/8)
b		P							

a (N) = {(SS × 41.75/1.3102) – 116.2604} × 1.025
a (M) = {(SS × 45.821033/1.3102) – 112.9154} × 0.975
x = b + (SS/1.3102 × 9.984)

Las medidas de instalación y sus métodos de cálculo para cada objetivo se muestran anteriormente.

Las letras alfabéticas de las tablas y los métodos de cálculo indican lo siguiente.

SS : tamaño de pantalla medida diagonalmente (pulgadas)
a : distancia entre la pantalla y el centro del objetivo
b : distancia entre el techo y el centro del objetivo
x : distancia entre el techo y el centro de la pantalla
N : mínimo
M : máximo
P : Si utiliza la unidad PSS-610, la altura podrá ajustarse en 231, 256, 281, 331, 356, 381 mm (9 1/8, 10 1/8, 11 1/8, 13 1/8, 14 1/8, 15 pulgadas).

Deutsch

Installation an der Decke (Frontprojektion)

Die Installationsabmessungen und das jeweilige Berechnungsverfahren für die einzelnen Objektive sind oben angegeben.

Die Buchstaben in den Tabellen und den Berechnungsverfahren haben folgende Bedeutung:

SS : Projektionsschirmgröße in Zoll, diagonal gemessen
a : Abstand zwischen dem Projektionsschirm und der Mitte des Objektivs
b : Abstand zwischen der Decke und der Mitte des Objektivs
x : Abstand zwischen der Decke und der Mitte des Projektionsschirms
N : Mindestens
M : Höchstens
P : Wenn Sie die PSS-610 verwenden, kann die Höhe auf die folgenden Zahlenwerte eingestellt werden 231, 256, 281, 331, 356, 381 mm.

Italiano

Installazione sul soffitto (proiezione frontale)

Le misure di installazione e il loro metodo di calcolo per ogni obiettivo sono mostrati qui sopra.

Le lettere nei diagrammi e i metodi di calcolo indicano quanto segue.

SS : dimensione schermo misurata diagonalmente (pollici)
a : distanza tra lo schermo e il centro dell'obiettivo
b : distanza tra il soffitto e il centro dell'obiettivo
x : distanza tra il soffitto e il centro dello schermo
N : Minima
M : Massima
P : Quando si usa il PSS-610, l'altezza può essere regolata su 231, 256, 281, 331, 356, 381 mm.

English

Attaching the projector suspension support PSS-610

Français

Fixation du support de suspension de projecteur PSS-610

Español

Instalación del soporte de suspensión del proyector PSS-610

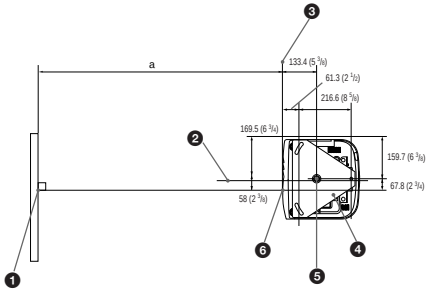
Deutsch

Anbringen der Projektoraufhängung PSS-610

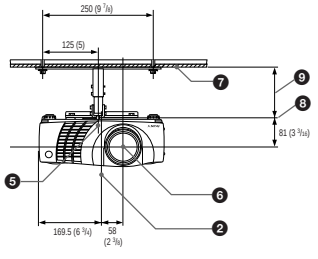
Italiano

Applicazione del supporto di sospensione del proiettore PSS-610

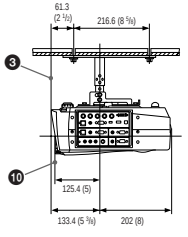
C



D



E



· **When using the standard lens equipped with the VPL-PX21/PX31 / Si vous utilisez l'objectif standard qui équipe le VPL-PX21/PX31 / Installation mit dem Standardobjektiv des VPL-PX21/PX31 / Al emplear el objetivo estándar equipado con el VPL-PX21/PX31 / Quando si utilizza l'obiettivo standard in dotazione con il VPL-PX21/PX31**

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

For more details on the ceiling installation, refer to the Installation manual for Dealers of the PSS-610. The installation measurements are shown above when you install the projector on the ceiling.

Top view C

Align the center of the lens with the center of the screen.

Front view D

The lens is offset 67.8 mm (2 3/4 inches) to the right from the center of the supporting pole. When mounting, take care to align the center of the lens with the center of the screen; not the center of the supporting pole.

Side view E

a) Distance between the screen and the center of the lens
❶ Center of the screen
❷ Center of the unit
❸ Front of the cabinet
❹ Upper ceiling mount bracket
❺ Center of the supporting pole (The center of the supporting pole is different from that of the unit.)
❻ Center of the lens
❼ Ceiling
❽ The bottom surface of the mounting bracket
❾ Distance between the ceiling and the surface of the mounting bracket
Using adjustment pipe (b): 150/175/200 mm (6/7/7 7/8 inches)
Using adjustment pipe (c): 250/275/300 mm (9 7/8 /10 7/8 /11 7/8 inches)
❿ Front of the lens

Pour plus de détails sur l'installation au plafond, reportez-vous au manuel d'installation pour les revendeurs du PSS-610. Les dimensions d'installation pour le montage au plafond sont indiquées ci-dessus.

Vue du dessus C

Alignez le centre de l'objectif sur le centre de l'écran.

Vue frontal D

L'objectif est décalé de 67,8 mm (2 3/4 pouces) vers la droite du centre du pivot de support. Au moment du montage, veillez à aligner correctement le centre de l'objectif sur le centre de l'écran; pas le centre du pivot de support.

Vue latérale E

a) Distance entre l'écran et le centre de l'objectif
❶ Centre de l'écran
❷ Centre de l'appareil
❸ Avant du meuble
❹ Support de montage de plafond supérieur
❺ Centre du pivot de support (Le centre du pivot de support est différent de celui de l'appareil.)
❻ Centre de l'objectif
❼ Plafond
❽ Le dessous du support de montage
❾ Distance entre le plafond et la surface du supprt de montage
Utilisation du tube de réglage (b): 150/175/200 mm (6/7/7 7/8 pouces)
Utilisation du tube de réglage (c): 250/275/300 mm (9 7/8 /10 7/8 /11 7/8 pouces)
❿ Avant de l'objectif

Para más información sobre la instalación en el techo, consulte el manual de instalación para proveedores de la unidad PSS-610. Las medidas de instalación se muestran anteriormente para cuando instale el proyector en el techo.

Vista superior C

Alinee el centro del objetivo con el centro de la pantalla.

Vista frontal D

El objetivo está desplazado 67,8 mm (2 3/4 pulgadas) a la derecha del centro de la columna de soporte. Al realizar el montaje, alinee el centro del objetivo con el centro de la pantalla y no con el centro de la columna de soporte.

Vista lateral E

a) Distancia entre la pantalla y el centro del objetivo
❶ Centro de la pantalla
❷ Centro de la unidad
❸ Parte frontal de la caja
❹ Soporte de montaje superior para techo
❺ Centro de la columna de soporte (El centro de la columna de soporte no es el mismo que el de la unidad.)
❻ Centro del objetivo
❼ Techo
❽ La base del la superficie del soporte de montaje
❾ Distancia entre el techo y la base del proyector
Uso del tubo de ajuste (b): 150/175/200 mm (6/7/7 7/8 pulgadas)
Uso del tubo de ajuste (c): 250/275/300 mm (9 7/8 /10 7/8 /11 7/8 pulgadas)
❿ Parte frontal del objetivo

Näheres zur Deckenmontage finden Sie in der Installationsanleitung zur PSS-610 für Händler. Die Installationsabmessungen für das Montieren des Projektors an der Decke sind oben angegeben.

Draufsicht C

Richten Sie die Mitte des Objektivs an der Mitte des Projektionsschirms aus.

Vorderansicht D

Das Objektiv am Projektor ist 67,8 mm nach rechts von der Mitte des Ständers versetzt. Achten Sie beim Installieren darauf, die Mitte des Objektivs, nicht die Mitte des Ständers, an der Mitte des Projektionsschirms auszurichten.

Seitenansicht E

a) Abstand zwischen dem Projektionsschirm und der Mitte des Objektivs
❶ Mitte des Projektionsschirms
❷ Mitte des Geräts
❸ Vorderseite des Gehäuses
❹ Deckenmontagehalterung
❺ Mitte des Ständers (Die Mitte des Ständers entspricht nicht der des Geräts.)
❻ Mitte des Objektivs
❼ Decke
❽ Die Unterseite der Halterung
❾ Abstand zwischen der Decke und der Oberlfäche der Hlaterung
Mit Einstellrohr (b): 150/175/200 mm
Mit Einstellrohr (c): 250/275/300 mm
❿ Vorderseite des Objektivs

Per ulteriori informazioni sull'installazione al soffitto, fare riferimento al manuale di installazione per rivenditori relativo al supporto di sospensione PSS-610. Le misure di installazione per l'installazione al soffitto sono indicate di seguito.

Vista dall'alto C

Allineare il centro della lente con il centro dello schermo.

Vista frontale D

Rispetto al centro per l'asta di supporto, la lente del proiettore è spostata verso destra di 67,8 mm. Durante il montaggio, assicurarsi di allineare il centro della lente del proiettore e non il centro per l'asta di supporto con il centro dello schermo.

Vista laterale E

a) Distanza fra lo schermo e il centro dell'obiettivo
❶ Centro dello schermo
❷ Centro dell'apparecchio
❸ Parte anteriore dell'apparecchio
❹ Staffa di montaggio al soffitto
❺ Centro per l'asta di supporto (Il centro per l'asta di supporto è diverso da quello dell'apparecchio.)
❻ Centro della lente
❼ Soffitto
❽ La superficie inferiore della staffa di montaggio
❾ Distanza fra il soffitto e la superficie della staffa di montaggio
Utilizzando il tubo di regolazione (b): 150/175/200 mm
Utilizzando il tubo di regolazione (c): 250/275/300 mm
❿ Parte anteriore della lente

English

Floor Installation (Rear Projection: Optical Axis Angle 0 Degree)

Français

Installation au sol (Rétroprojection: angle d'axe optique de 0 degré)

Español

Instalación en el suelo (proyección posterior: ángulo de eje óptico de 0 grados)

Deutsch

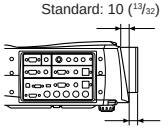
Installation am Boden (Rückprojektion: Winkel der optischen Achse = 0 Grad)

Italiano

Installazione sul pavimento (proiezione posteriore: grado zero dell'angolo di asse ottico)

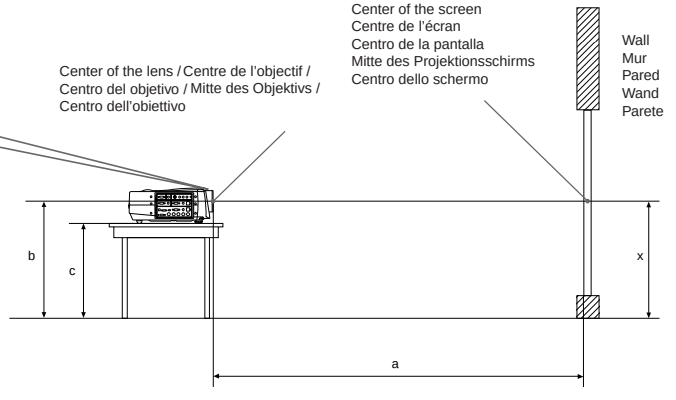
F

Distance between the front of the cabinet and the center of the lens
Distance entre l'avant du châssis et le centre de l'objectif
Distancia entre la parte frontal de la unidad y el centro del objetivo
Abstand zwischen der Gehäusevorderseite und der Objektivmitte
Distanza tra la parte anteriore dell'apparecchio e il centro dell'obiettivo



VPLL-ZM101: 28.9 (1 1/8)
VPLL-ZM31: 54.3 (2 1/8)
VPLL-FM21: 35.7 (1 13/32)

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)



This section describes the examples for installing the projector behind the screen, etc. **F**

See the charts on pages 58 and 59 concerning the installation measurements.

The alphabetical letters in the illustration indicate the distances below.
a : distance between the screen and the center of the lens
b : distance between the floor and the center of the lens
c : distance between the floor and the bottom of the adjusters of the projector
x : free

Note

If the projector has been set at the factory and if you project a picture from the rear, the picture will be upside down. If you use a mirror, the picture may be reversed. In these cases, change the INSTALLATION in the INSTALL SETTING menu.
For details, refer to the "INSTALL SETTING" menu in the Operating Instructions for your LCD data projector.

Cette section décrit les exemples d'installation du projecteur derrière l'écran, etc. **F**

Reportez-vous aux tableaux des pages 58 à 59 sur les mesures d'installation.

Les caractères alphabétiques dans l'illustration indiquent les distances ci-dessous.
a : distance entre l'écran et le centre de l'objectif
b : distance entre le sol et le centre de l'objectif
c : distance entre le sol et la base des pieds réglables du projecteur
x : libre

Remarque

Si le projecteur est réglé par défaut et si vous rétroprojetez une image, l'image sera retournée. Vous pouvez redresser l'image en utilisant un miroir. Dans ces cas, changez INSTALLATION dans le menu REGL. INSTAL.
Pour plus de détails, voir le menu "REGL. INSTAL." dans le mode d'emploi de votre projecteur de données LCD.

En esta sección se muestran ejemplos para instalar el proyector detrás de la pantalla, etc. **F**

Consulte las tablas de las páginas 58 a 59 en relación con las medidas de instalación.

Las letras alfabéticas de la ilustración indican las distancias mostradas a continuación.
a : distancia entre la pantalla y el centro del objetivo
b : distancia entre el suelo y el centro del objetivo
c : distancia entre el suelo y la base de los ajustadores del proyector
x : libre

Nota

Si el proyector se ha ajustado en fábrica y proyecta una imagen desde la parte posterior, la imagen aparecerá invertida. Si utiliza un espejo, es posible que aparezca al revés. En estos casos, cambie la opción INSTALACION del menú AJUSTE INST.
Para obtener información más detallada, consulte el menú "AJUSTE INST" en las instrucciones de uso de vuestro proyector LCD de datos.

In diesem Abschnitt finden Sie Beispiele für das Installieren des Porjektors hinter dem Projektionsschirm usw. **F**

In den Tabellen auf Seite 58 bis 59 finden Sie die Installationsabmessungen.

Die Buchstaben in der Abbildung beziehen sich auf die unten beschriebenen Abstände.
a : Abstand zwischen dem Projektionsschirm und der Mitte des Objektivs
b : Abstand zwischen dem Boden und der Mitte des Objektivs
c : Abstand zwischen dem Boden und der Unterseite der Ausgleichsfüße des Projektors
x : frei

Hinweis

Wenn der Projektor werkseitig eingestellt wurde und Sie ein Bild mit dem Rückprojektionsverfahren projizieren, erscheint das Bild auf dem Kopf. Wenn Sie einen Spiegel verwenden, erscheint das Bild möglicherweise seitenverkehrt. Ändern Sie in diesem Fall die Einstellung für INSTALLATION im Menü ANFANGSWERTE.
Näheres können Sie im Abschnitt zum Menü "ANFANGSWERTE" in der Bedienungsanleitung Ihres LCD-Datenprojektors nachlesen.

Questa sezione descrive gli esempi di installazione del proiettore dietro allo schermo, ecc. **F**

Vedere i diagrammi da pagina 58 a pagina 59 relativi alle misure di installazione.

Le lettere nell'illustrazione indicano le distanze descritte di seguito.
a : distanza fra lo schermo e il centro dell'obiettivo
b : distanza tra il pavimento e il centro dell'obiettivo
c : distanza fra il pavimento e la base dei dispositivi di regolazione del proiettore
x : libero

Nota

Se il proiettore è stato impostato in fabbrica e si proietta un'immagine dalla parte posteriore, l'immagine risulterà capovolta. Se si utilizza uno specchio, l'immagine potrebbe risultare invertita. In questi casi, modificare INSTALLAZIONE nel menu IMPOST.INST.
Per informazioni dettagliate, fare riferimento a al menu "IMPOST.INST" nelle istruzioni per l'uso de vostro proiettore di dati con schermo a cristalli liquidi.

English

Floor Installation (Rear Projection: Optical Axis Angle 0 Degree)

Français

Installation au sol (Rétroprojection: angle d'axe optique de 0 degré)

■ Standard lens / Objectif standard / Objetivo estándar / Standardobjektiv / Uso Obiettivo standard

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

SS		40	60	80	100	120	150	180	200	250	300
a	N	1490 (58 3/4)	2280 (89 7/8)	3060 (120 1/2)	3850 (151 5/8)	4630 (182 3/8)	5810 (228 7/8)	6990 (275 1/4)	7770 (306)	9740 (383 5/8)	11700 (460 3/4)
	M	1820 (71 3/4)	2780 (109 1/2)	3740 (147 3/8)	4700 (185 1/8)	5660 (222 7/8)	7100 (279 5/8)	8540 (336 3/8)	9500 (374 1/8)	11900 (468 5/8)	14300 (563 1/8)
b		x (x)									
c		x–79 (x–3 1/8)									

a (N) = {(SS × 50.18/1.3102) – 75.10104} × 1.025
a (M) = {(SS × 64.518746/1.3102) – 107.8977} × 0.975
b = x
c = x – 79

■ VPLL-ZM101

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

SS		40	60	80	100	120	150	180	200	250	300
a	N	2600 (102 3/8)	4000 (157 1/2)	5410 (213 1/8)	6810 (268 1/4)	8220 (323 3/4)	10330 (408 3/4)	12430 (489 1/2)	13840 (545)	17350 (683 1/4)	20870 (821 7/8)
	M	3890 (153 1/4)	5940 (234)	7980 (314 1/4)	10030 (394 15/16)	12080 (475 3/4)	15150 (596 9/8)	18220 (717 1/2)	20270 (798 1/4)	25380 (999 3/8)	30500 (1201)
b		x (x)									
c		x–79 (x–3 1/8)									

a (N) = {(SS × 89.82/1.3102) – 209.2626} × 1.025
a (M) = {(SS × 137.56012/1.3102) – 211.5915} × 0.975
b = x
c = x – 79

The installation measurements and their calculation method for each lens are shown above.

The alphabetical letters in the charts and calculation methods indicate the following.
SS : screen size measured diagonally (inches)
a : distance between the screen and the center of the lens
b : distance between the floor and the center of the lens
c : distance between the floor and the bottom of the adjusters of the projector
x : free
N : minimum
M : maximum

Les mesures d'installation et leur méthode de calcul pour chaque objectif sont indiquées ci-dessus.

Les caractères alphabétiques dans l'illustration indiquent ce qui suit.
SS : dimension de l'écran en diagonale (pouces)
a : distance entre l'écran et le centre de l'objectif
b : distance entre le sol et le centre de l'objectif
c : distance entre le sol et la base des pieds réglables du projecteur
x : libre
N : minimum
M : maximum

Español

Instalación en el suelo (proyección posterior: ángulo de eje óptico de 0 grados)

Deutsch

Installation am Boden (Rückprojektion: Winkel der optischen Achse = 0 Grad)

Italiano

Installazione sul pavimento (proiezione posteriore: grado zero dell'angolo di asse ottico)

■ VPLL-ZM31

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

SS		40	60	80	100	120	150	180	200	250	300
a	N	1190 (46 7/8)	1840 (72 1/2)	2490 (98 1/8)	3150 (124 1/8)	3800 (149 5/8)	4780 (188 1/4)	5760 (226 7/8)	6410 (252 1/2)	8050 (317)	9680 (381 1/4)
	M	1250 (49 1/4)	1940 (76 1/2)	2620 (103 1/4)	3300 (130)	3980 (156 3/4)	5000 (196 7/8)	6030 (237 7/16)	6710 (264 1/4)	8410 (331 1/4)	10120 (398 1/2)
b		x (x)									
c		x–79 (x–3 1/8)									

a (N) = {(SS × 41.75/1.3102) – 116.2604} × 1.025
a (M) = {(SS × 45.821033/1.3102) – 112.9154} × 0.975
b = x
c = x – 79

■ VPLL-FM21

Unit: mm (inches) / Unité: mm (pouces) / Unidad: mm (pulgadas) / Einheit: mm (Zoll) / Unità: mm (pollici)

SS	40	60	80	100	120	150	180	200	250	300
a	670 (26 1/2)	1050 (41 3/8)	1430 (56 3/8)	1800 (70 7/8)	2180 (85 7/8)	2750 (108 3/8)	3310 (130 3/8)	3690 (145 3/8)	4630 (182 3/8)	5580 (219 3/4)
b	x (x)									
c	x–79 (x–3 1/8)									

a = {(SS × 24.71/1.3102) – 81.86279} × 1.0
b = x
c = x – 79

Las medidas de instalación y sus métodos de cálculo para cada objetivo se muestran anteriormente.

Las letras alfabéticas de las tablas y los métodos de cálculo indican lo siguiente.
SS : tamaño de pantalla medida diagonalmente (pulgadas)
a : distancia entre la pantalla y el centro del objetivo
b : distancia entre el suelo y el centro del objetivo
c : distancia entre el suelo y la base de los ajustadores del proyector
x : libre
N : mínimo
M : máximo

Die Installationsabmessungen und das jeweilige Berechnungsverfahren für die einzelnen Objektive sind oben angegeben.

Die Buchstaben in den Tabellen und den Berechnungsverfahren haben folgende Bedeutung:
SS : Projektionsschirmgröße in Zoll, diagonal gemessen
a : Abstand zwischen dem Projektionsschirm und der Mitte des Objektivs
b : Abstand zwischen dem Boden und der Mitte des Objektivs
c : Abstand zwischen dem Boden und der Unterseite der Ausgleichsfüße des Projektors
x : frei
N : Mindestens
M : Höchstenss

Le misure di installazione e il loro metodo di calcolo per ogni obiettivo sono mostrati qui sopra.

Le lettere nei diagrammi e i metodi di calcolo indicano quanto segue.
SS : dimensione schermo misurata diagonalmente (pollici)
a : distanza fra lo schermo e il centro dell'obiettivo
b : distanza tra il pavimento e il centro dell'obiettivo
c : distanza fra il pavimento e la base dei dispositivi di regolazione del proiettore
x : libero
N : Minima
M : Massima

SONY

4-080-133-**01** (1)

Quick Reference Card / Carte de référence rapide / Tarjeta de referencia rápida / Kurzreferenz / Scheda di riferimento rapido /

VPL-PX21/VPL-PX31

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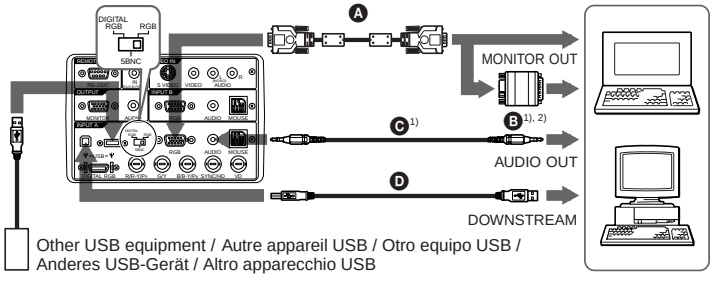
Connections / Connexions / Conexiones / Anschlüsse / Collegamenti /

Ⓐ HD D-sub 15-pin cable / Câble HD D-sub à 15 broches / Cable HD D-sub 15 pines / 15poliges D-Sub-HD-Kabel / Cavo HD D-sub a 15 piedini
Ⓑ Signal adapter / Adaptateur de signal / Adaptador de señales / Signaladapter / Adattatore del segnale
Ⓒ Stereo audio connecting cable / Câble de connexion audio stéréo / Cable de conexión de audio estéreo / Stereo-Audioverbindungskabel / Cavo audio stereo
Ⓓ USB cable / Câble USB / Cable USB / USB-Kabel / Cavo USB /
Ⓔ S-video cable / Câble S-vidéo / Cable de vídeo S / S-Videokabel / Cavo S-Video
Ⓕ Audio/video cable / Câble audio/vidéo / Cable de audio/vídeo / Audio-/Videokabel / Cavo audio/video /

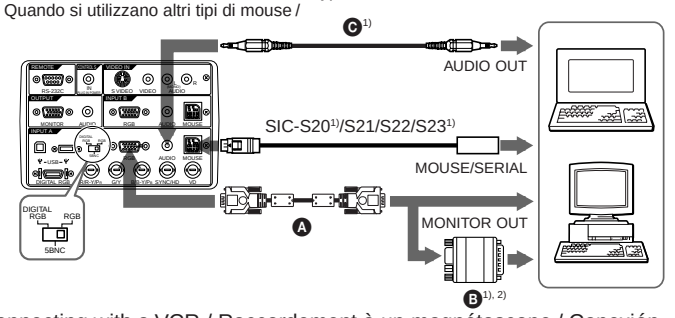
Connecting with a computer / Raccordement à un ordinateur / Conexión con ordenador / Anschließen an einen Computer / Collegamento a un computer

● Using a USB equipment (e.g., USB mouse) / Utilisation d'un appareil USB (p.ex., souris USB) / Empleo de un equipo USB (p. ej., un ratón USB) / Verwenden eines USB-Geräts (z. B. einer USB-Maus) / Uso di un dispositivo USB (ad esempio un mouse USB)

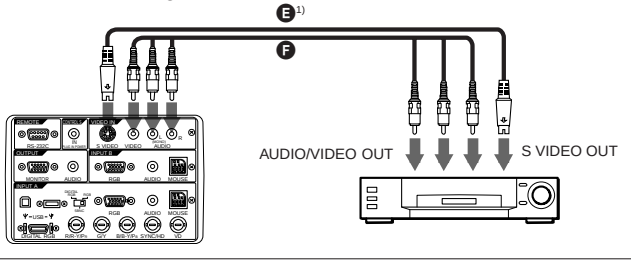


System Requirement / Configuration requise / Requisito de sistema / Systemvoraussetzung / Requisiti di sistema / System Requirement : Windows 98 / 98

● When using other type of mouse / Si vous utilisez un autre type de souris / Si utiliza otro tipo de ratón / Wenn Sie einen anderen Maustyp verwenden / Quando si utilizzano altri tipi di mouse /



Connecting with a VCR / Raccordement à un magnétoscope / Conexión con una vídeograbadora / Anschließen an einen Videorecorder / Collegamento a un videoregistratore



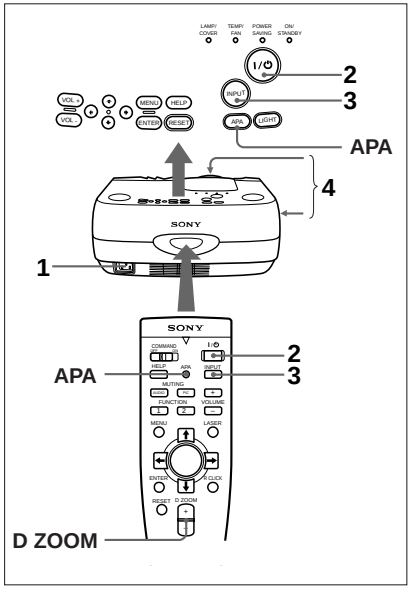
1) not supplied / non fourni / no suministrado / nicht mitgeliefert / non in dotazione /
2) Only connecting to the Macintosh / Raccordement au Macintosh uniquement / Conexión únicamente al sistema Macintosh / Nur zum Anschließen an den Macintosh / Collegamento solo al Macintosh

Projection Distances / Distances de projection / Distancias de proyección / Projektionsentfernungen / Distanze di proiezione /

Screen size(inchies) / Taille de l'écran (pouces) / Tamaño de la pantalla (pulgadas) / Projektionsschirmgröße (Zoll) / Dimensione schermo (pollici)	Distance (m (feet)) / Distance (m (pieds)) / Distancia (m (pies)) / Abstand (m) /Distanza (m) /
40	1.5–1.8 (4.9–6.0)
60	2.3–2.8 (7.5–9.1)
80	3.1–3.7 (10.0–12.3)
100	3.9–4.7 (12.6–15.4)
120	4.6–5.7 (15.2–18.6)
150	5.8–7.1 (19.1–23.3)
200	7.8–9.5 (25.5–31.2)
300	11.7–14.3 (38.4–46.9)

http://getMANUAL.com

Basic Operation / Opération de base / Operación básica / Grundfunktion / Operazione di base /



English

1 After all equipment is connected completely, plug the AC power cord into the wall outlet.
2 Press the I / ⏻ key to turn on the projector.
3 Turn on equipment connected to the projector. Press the INPUT key to select “INPUT-A”, “INPUT-B”, “S-VIDEO” or “VIDEO”.
4 Turn the zoom ring to adjust the size of the picture, and turn the focus ring to adjust the focus.

To adjust the picture of computer automatically

Press the APA (Auto Pixel Alignment) key.

To correct the trapezoid

Correct the trapezoid of the picture by changing the DIGIT KEYSTONE value in the INSTALL SETTING menu.

To enlarge the image

Press the D ZOOM + key. Using an arrow key (↑/↓/←/→), move the icon to the point you want to enlarge. Press the D ZOOM + key again.

Français

1 Après que tous les appareils ont été complètement raccordés, branchez le câble d’alimentation sur une prise murale.
2 Appuyez sur la touche I / ⏻ pour mettre le projecteur sous tension.
3 Mettez sous tension l’appareil raccordé au projecteur. Appuyez sur la touche INPUT pour sélectionner “ENT.A”, “ENT.B”, “S-VIDEO” ou “VIDEO”.
4 Tournez la bague de zoom pour ajuster la taille de l’image et tournez la bague de mise au point pour ajuster la mise au point.

Pour régler automatiquement l’image de l’ordinateur

Appuyez sur la touche APA (alignement automatique des pixels).

Pour corriger la distorsion trapézoïdale

Corrigez la distorsion trapézoïdale en changeant la valeur TRAPEZE NUMER dans le menu REGL. INSTAL.

Pour agrandir l’image

Appuyez sur la touche D ZOOM +. A l’aide d'une touche fléchée (↑/↓/←/→), déplacez l’icône à l’endroit que vous voulez agrandir. Appuyez de nouveau sur la touche D ZOOM +.

Español

1 Una vez conectados todos los equipos por completo, enchufe el cable de alimentación de CA en la toma mural.
2 Pulse la tecla I / ⏻ para encender el proyector.
3 Encienda el equipo conectado al proyector. Pulse la tecla INPUT para seleccionar “ENTRAD A”, “ENTRAD B”, “S-VIDEO” o “VIDEO”.
4 Gire el anillo de zoom para ajustar el tamaño de la imagen, y gire el anillo de enfoque para ajustar el enfoque.

Para ajustar la imagen del ordenador automáticamente

Pulse la tecla APA (Alineación automática de píxeles).

Para corregir la distorsión trapezoidal

Corrija la distorsión trapezoidal de la imagen cambiando el valor de DIST TRAP DIG del menú AJUSTE INST.

Para ampliar la imagen

Pulse la tecla D ZOOM +. Mediante una tecla de flecha (↑/↓/←/→), desplace el icono hasta el punto que desee aumentar. Vuelva a pulsar la tecla D ZOOM +.

Deutsch

1 Wenn alle Geräte vollständig angeschlossen sind, stecken Sie den Stecker des Netzkabels in die Netzsteckdose.
2 Schalten Sie den Projektor mit der Taste I / ⏻ ein.
3 Schalten Sie die an den Projektor angeschlossenen Geräte ein. Wählen Sie mit der Taste INPUT “EING.A”, “EING.B”, “S-VIDEO” oder “VIDEO” aus.
4 Stellen Sie durch Drehen des Zoom-Rings die Größe des Bildes und durch Drehen des Fokussierrings den Fokus ein.

So lassen Sie das Bild des Computers automatisch einstellen

Drücken Sie die Taste APA (automatische Pixelausrichtung).

So korrigieren Sie die Trapezverzerrung

Korrigieren Sie die Trapezverzerrung des Bildes, indem Sie den Wert für TRAPEZ DIGITAL im Menü ANFANGSWERTE ändern.

So vergrößern Sie das Bild

Drücken Sie die Taste D ZOOM +. Stellen Sie das Symbol mit einer der Pfeiltasten (↑/↓/←/→) auf die zu vergrößernde Stelle. Drücken Sie die Taste D ZOOM + erneut.

Italiano

1 Dopo avere collegato saldamente tutti gli apparecchi, inserire l’alimentatore CA nella presa di rete.
2 Per accendere il proiettore, premere il tasto I / ⏻.
3 Accendere l’apparecchiatura collegata al proiettore. Premere il tasto INPUT per selezionare “INGRE A”, “INGRE B”, “S-VIDEO” o “VIDEO”.
4 Per regolare le dimensioni dell’immagine, ruotare il regolatore dello zoom, per regolare la messa a fuoco, ruotare il regolatore della focalizzazione.

Per regolare automaticamente l’immagine del computer

Premere il tasto APA (Allineamento automatico dei pixel).

Per correggere la distorsione dell’immagine

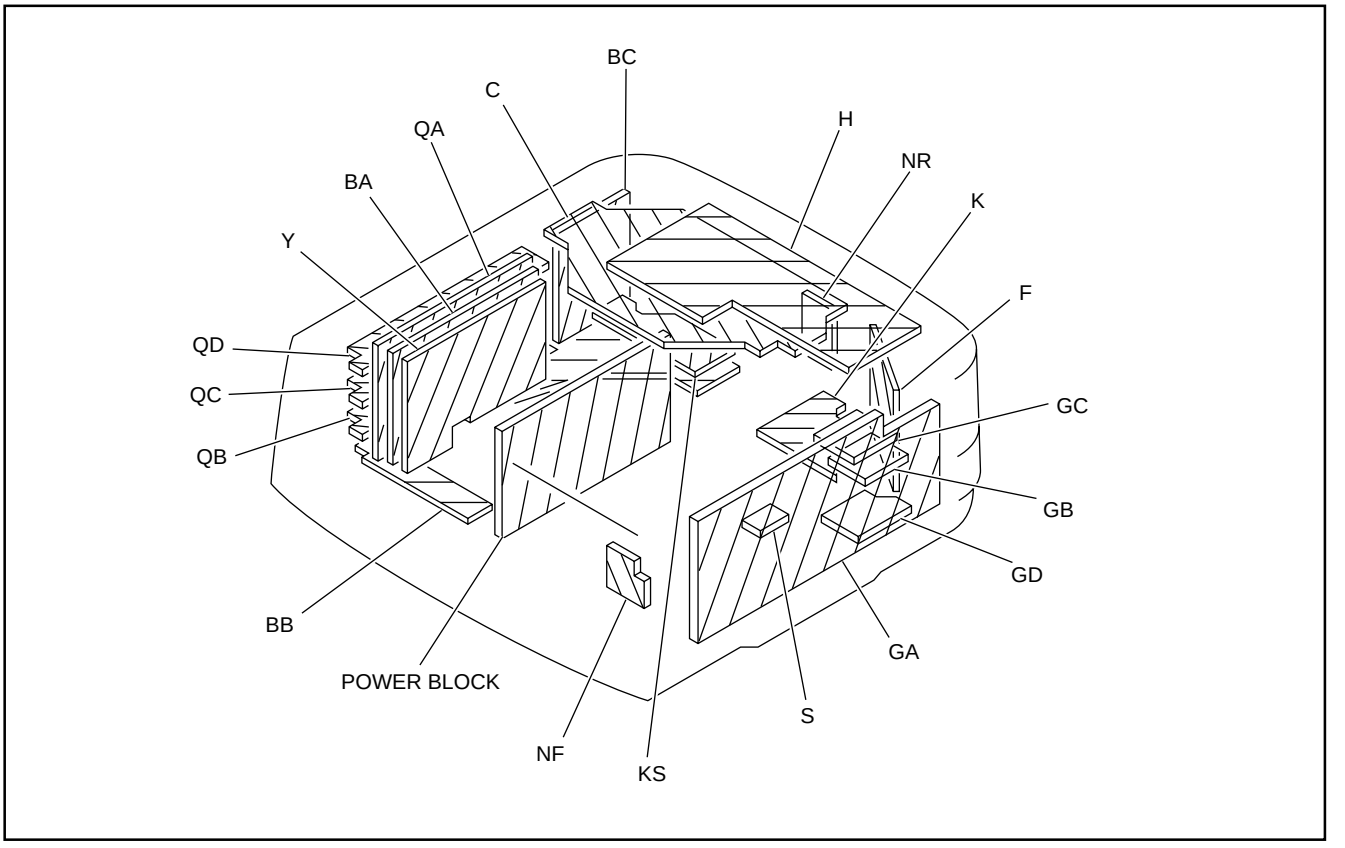
Correggere l’immagine distorta modificando il valore di KEYST. DIGIT. nel menu IMPOST. INST.

Per ingrandire l’immagine

Premere il tasto D ZOOM +. Utilizzando uno dei tasti direzionali, (↑/↓/←/→), spostare l’icona sul punto che si desidera ingrandire, quindi premere di nuovo il tasto D ZOOM +.

Section 2
Service Informations

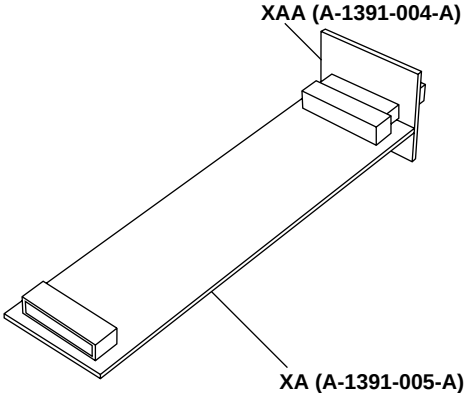
2-1. Circuit Boards Location



2-2. Servicing Tools

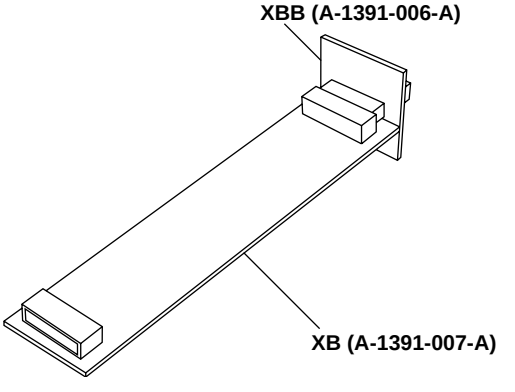
2-2-1. XA, XAA Extension Boards (70P)

• For Y board and QA board
(QA board use 2 pieces of XA and XAA board.)

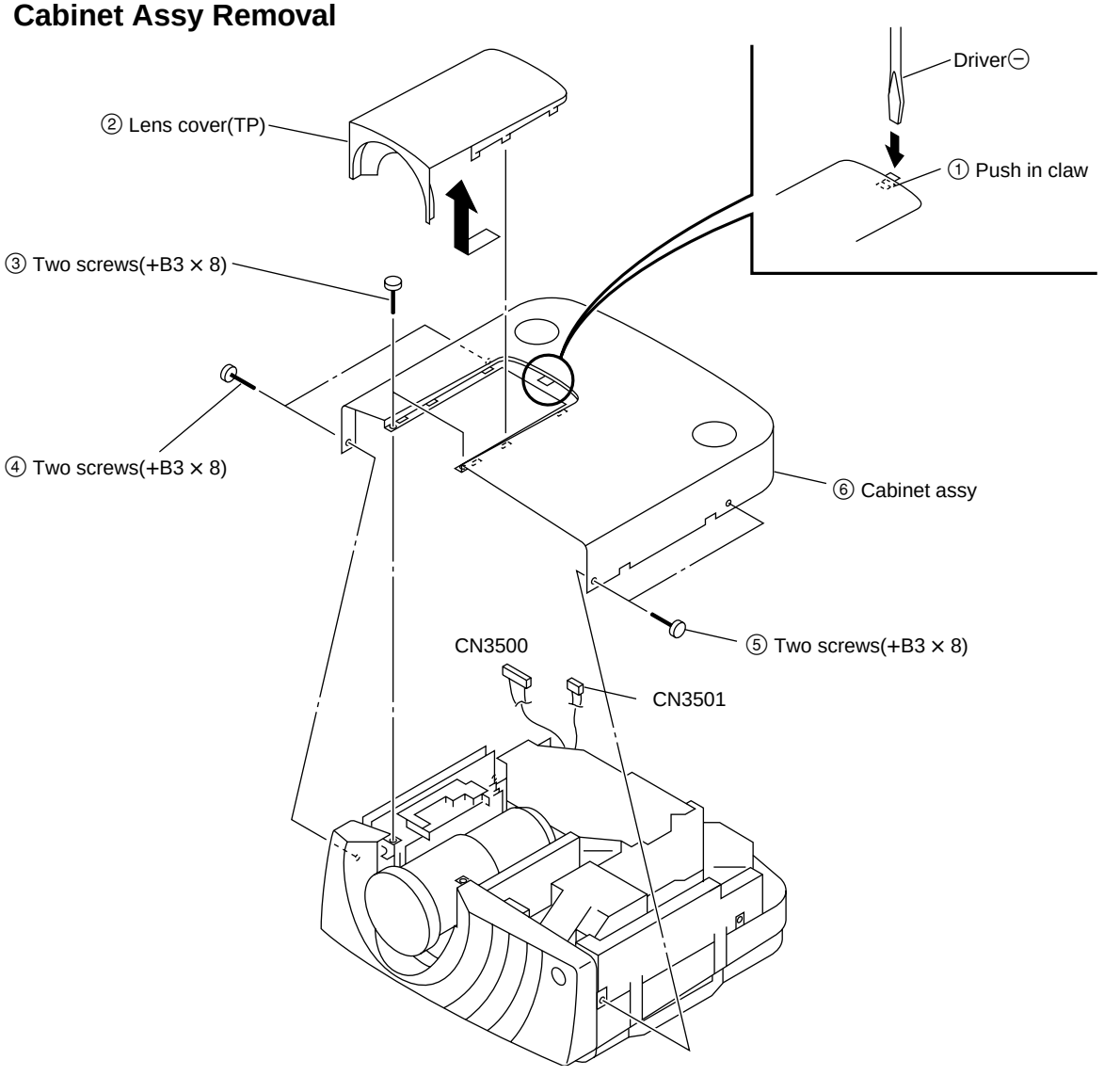


2-2-2. XB, XBB Extension Boards (50P)

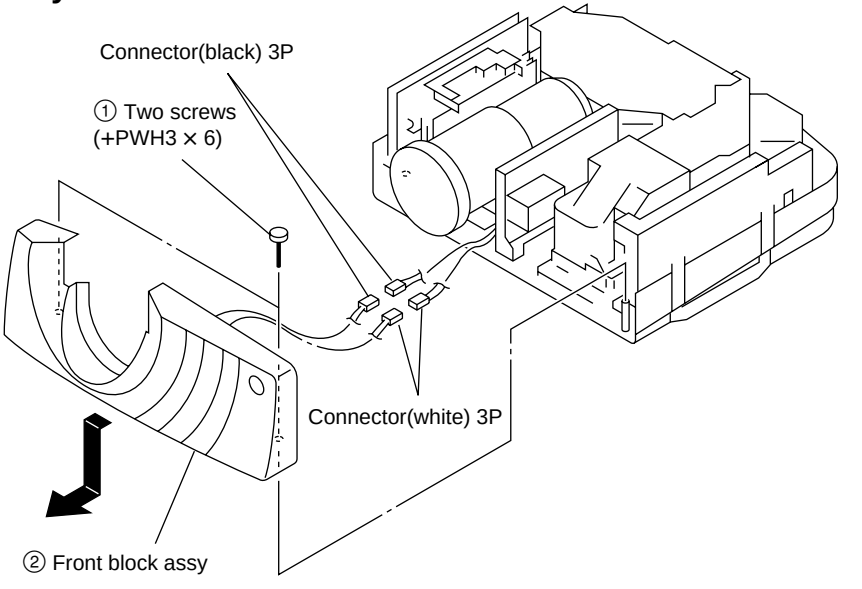
• For BA board.



2-3. Cabinet Assy Removal

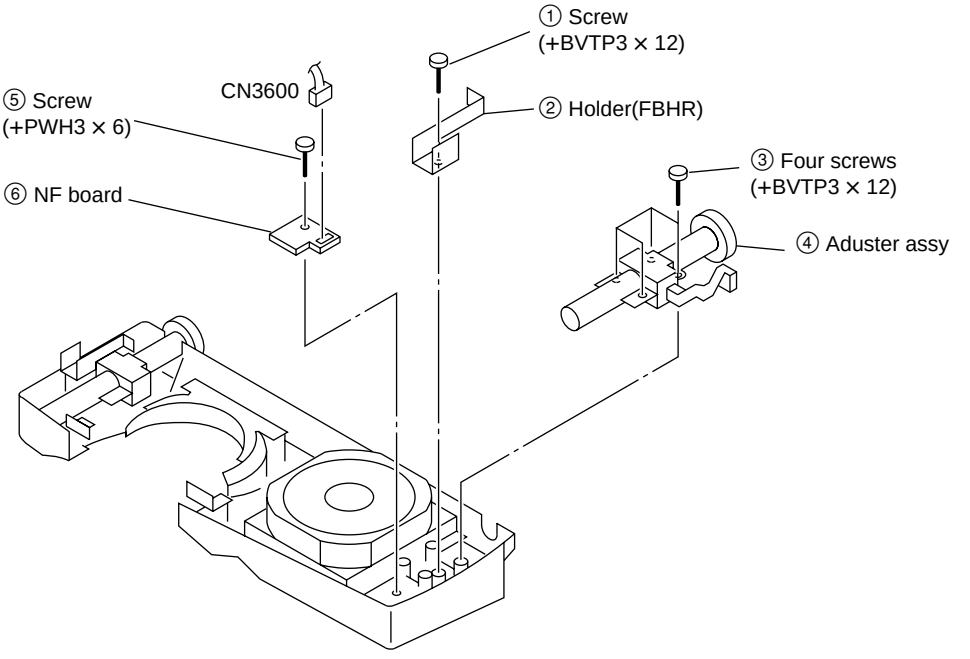


2-4. Front Block Assy Removal

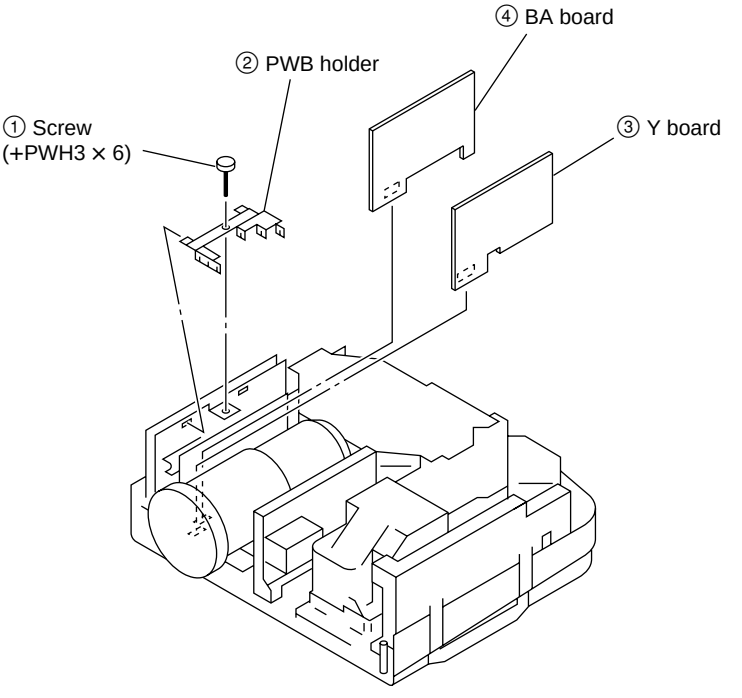


2-5. NF Board Removal

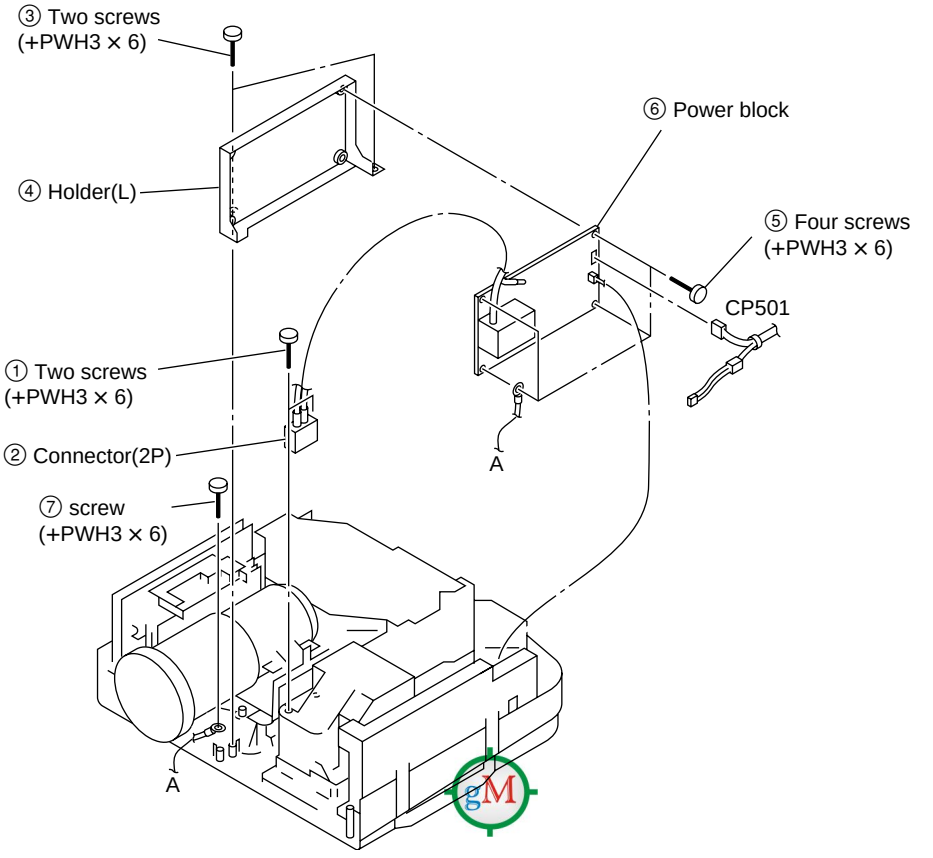
• Remove the Front Block Assy (Refer to 2-4.).



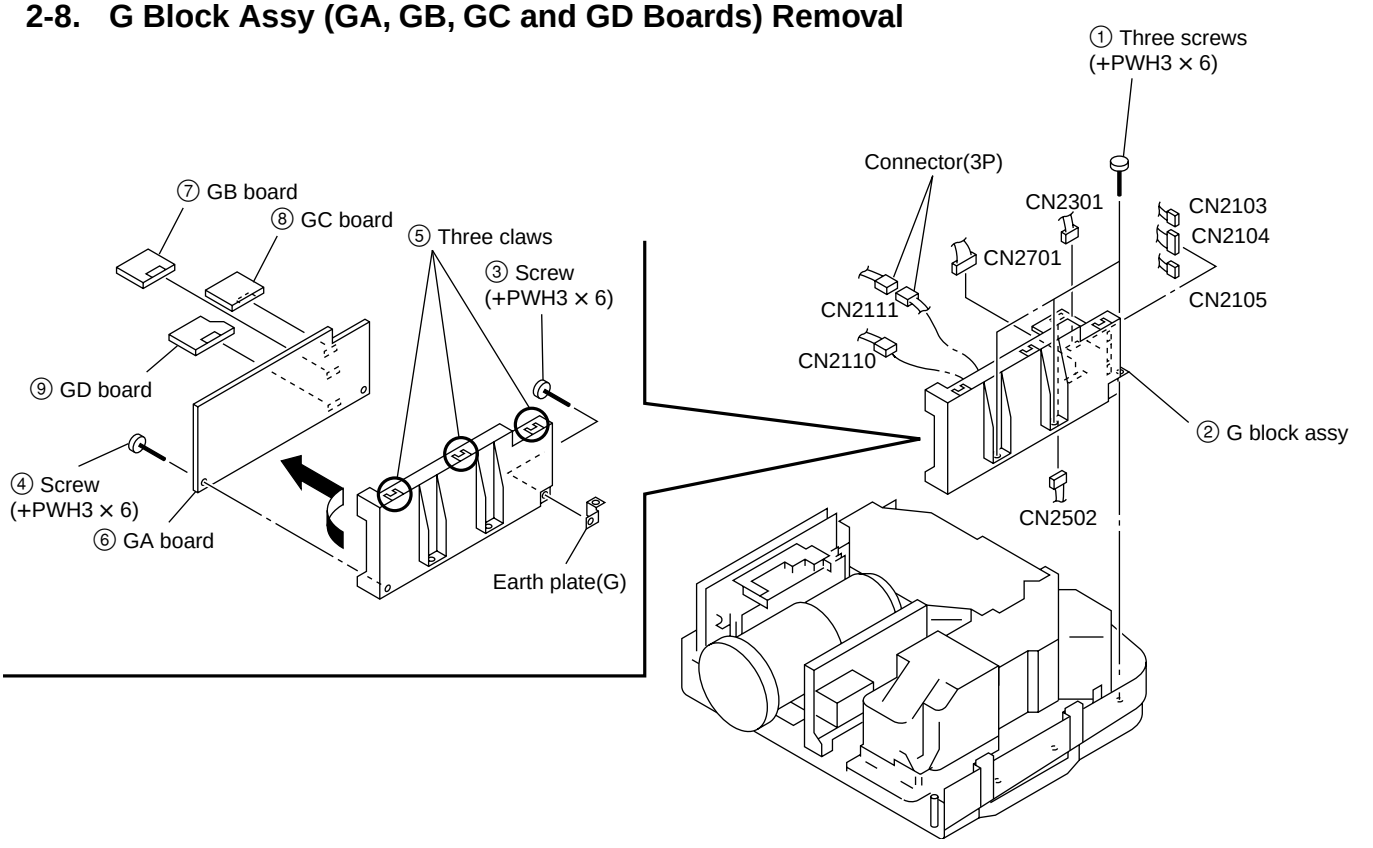
2-6. BA and Y Boards Removal



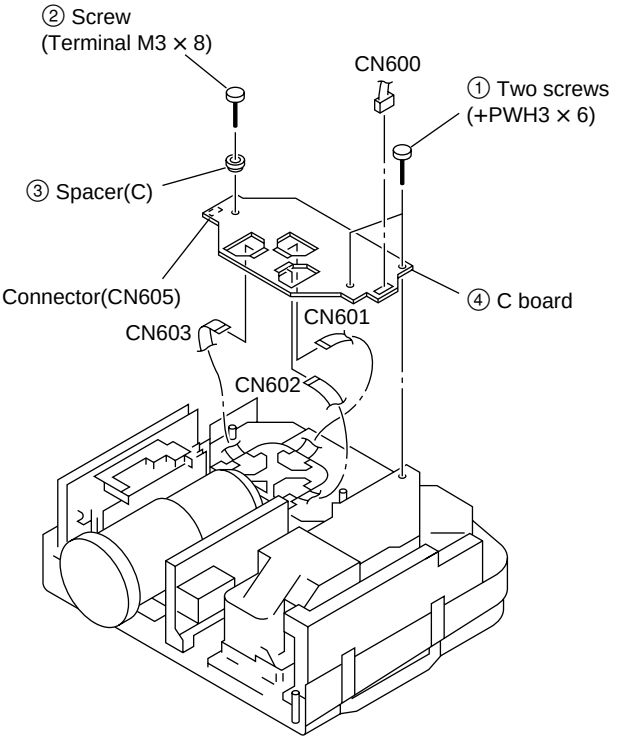
2-7. Power Block Removal



2-8. G Block Assy (GA, GB, GC and GD Boards) Removal

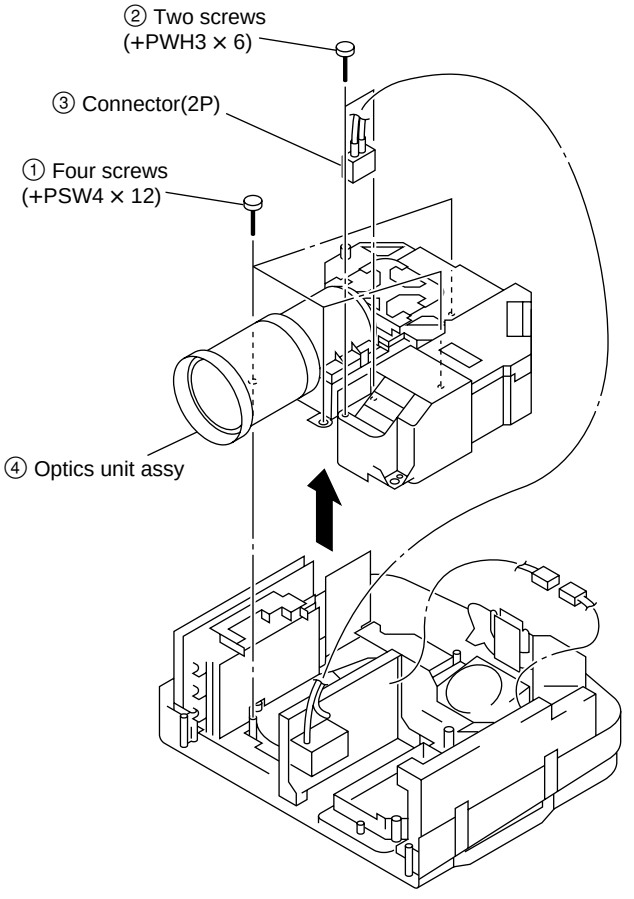


2-9. C Board Removal



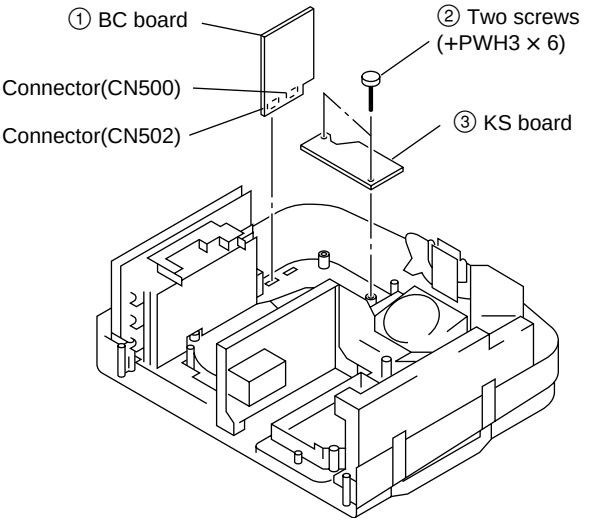
2-10. Optics Unit Assy Removal

• Remove the C Board (Refer to 2-9.).



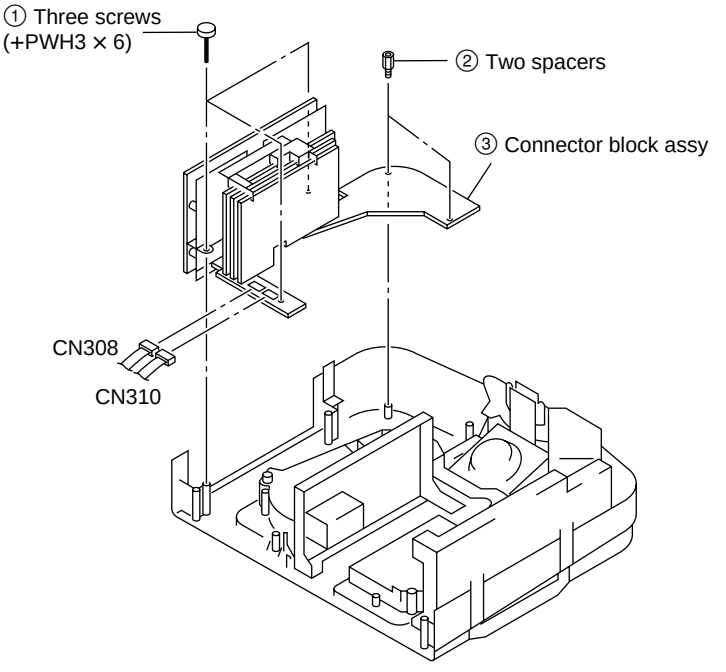
2-11. BC and KS Boards Removal

• Remove the Optics Unit (Refer to 2-10.).

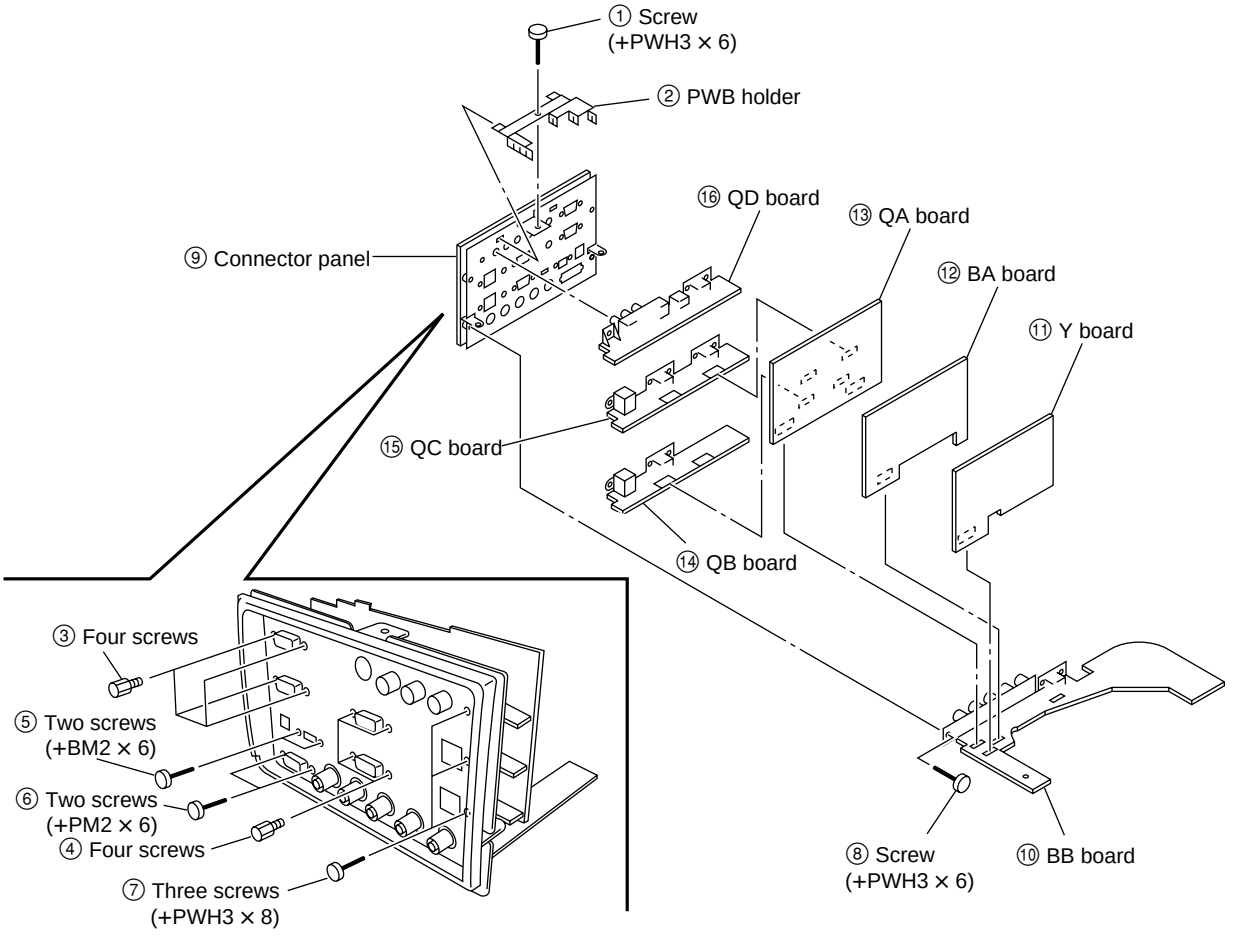


2-12. Connector Block Assy Removal

• Remove the KS Board (Refer to 2-11.).

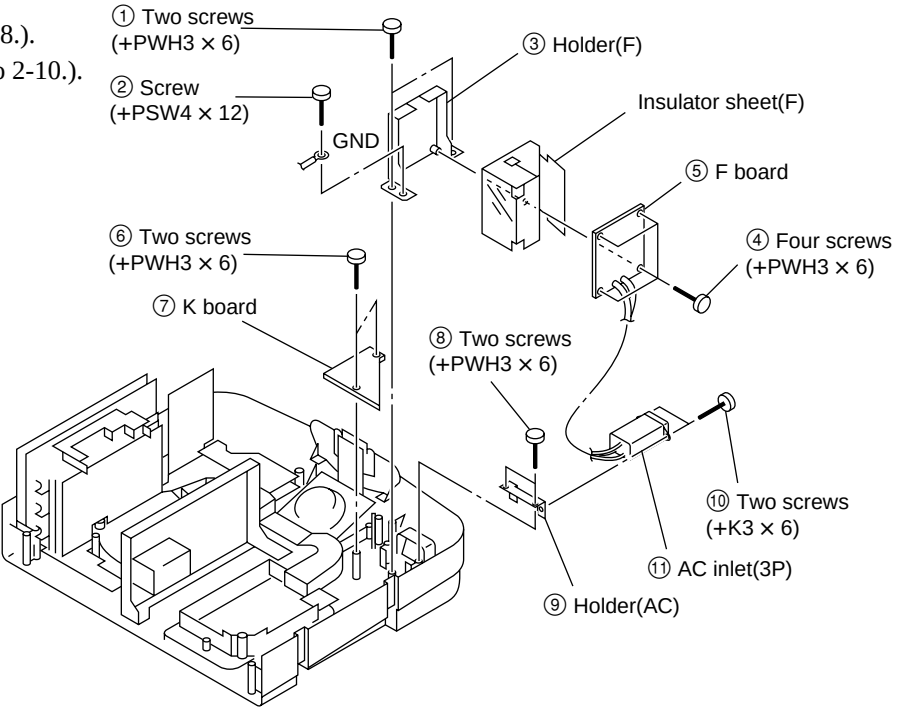


2-13. BB, QA, QB, QC and QD Boards Removal

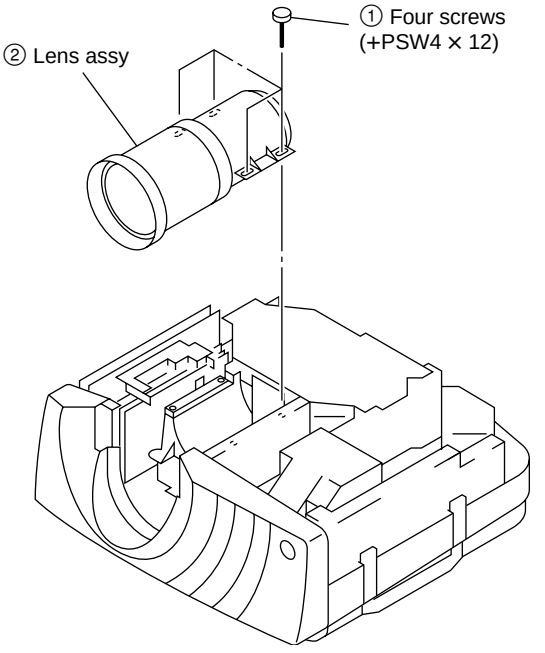


2-14. F, K Boards and AC Inlet Removal

- Remove the G Block Assy (Refer to 2-8.).
- Remove the Optics Unit Assy (Refer to 2-10.).

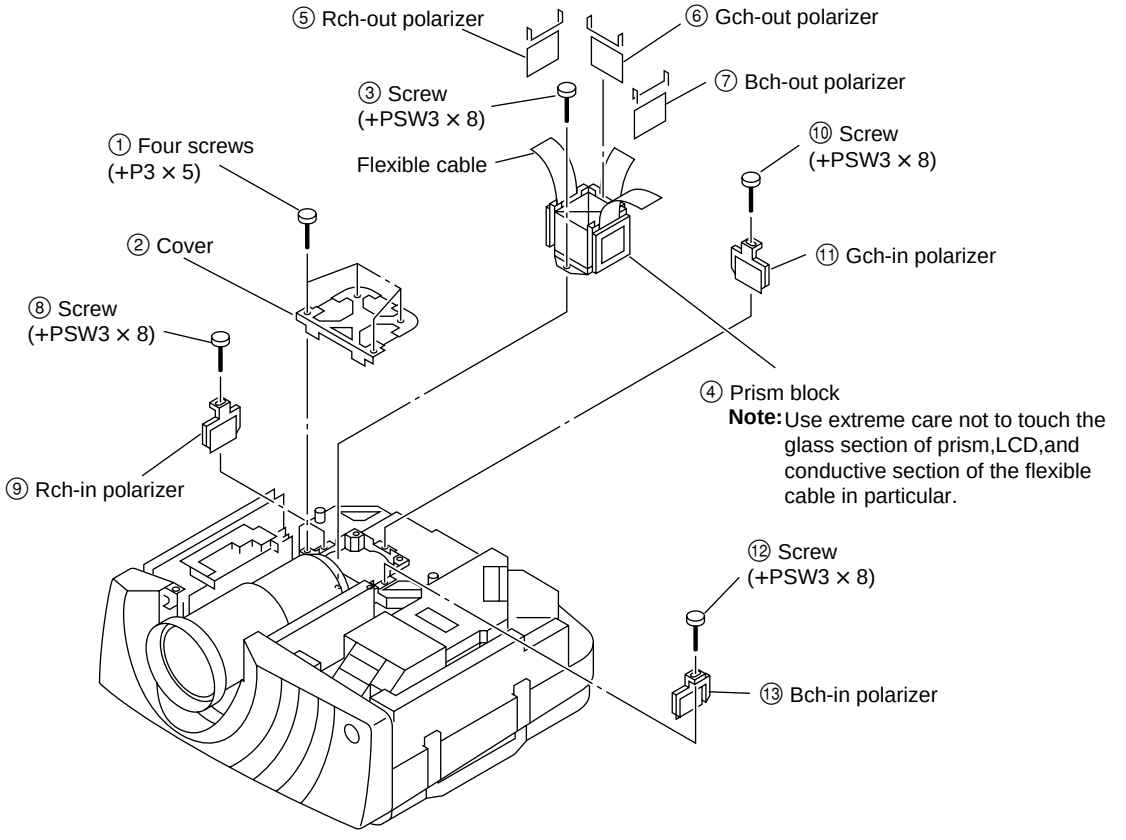


2-15. Lens Assy Removal



2-16. Prism Block and Polarizer Removal

• Remove the C Board (Refer to 2-9.).



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2-17. Note on Lamp Breakage

Note 1

When the lamp broken, its broken pieces may remain inside the unit.
Take off all the pices with gloves using care about a hand cut, before replacing.
Then, the fly-eye lens may be cloudy at the lamp breakage, at that time wipe the suface of the lens with an authorized lens cleaner kit.

- Cleaner (4-075-337-01)
- Wiper (4-075-338-01)

Note 2

Under the consideration of lamp's reliability, set the lamp mode to "LOW" during repairing the unit with the cabinet opening and the lamp on.

Section 3
Theory of Operation

3-1. BA Board

This circuit mainly performs the following processes.

a. VIDEO (C-VIDEO, Y/C, component), HDTV (Y PB PR) image processing
b. Sync separation processing

3-1-1. Main IC Functions

1. CXD2064 (IC221), Digital Comb Filter

Performs NTSC3.58, PAL4.43 3-line applicable digital Y/C separation.
The operating clock (fsc) output from Pin 46 of CXA2123 (IC101) is input to Pin 37. The VIDEO signal input from Pin 2 is digitally processed by this clock. The Y signal is then output from Pin 9 and the C signal from Pin 7.

2. CXA2123 (IC101), Chroma Decoder and Sync Processing

Chroma decoder/sync processing IC controlled by the I^2C bus. It can process C-VIDEO signals and Y/C signals. The C-VIDEO signal is input to Pin 1, the Y signal to Pin 44, and the C signal to Pin 43 to automatically differentiate between NTSC3.58, NTSC4.43, PAL, PAL-M, PAL-N, SECAM, and B/W. When identified as NTSC3.58 or PAL, it supplies a clock to IC221 (CXD2084) to perform Y/C separation. Y/C separation is performed in this IC when other systems are identified. The signals are then converted to the Y/U/V signals, and the Y signal is output from Pin 21, the Cb signal from Pin 22, and the Cr signal from Pin 23.
In sync processing, the C-VIDEO/Y signal input is separated into H and V, and the H-sync signal is output from Pin 9 while the V-sync signal is output from Pin 4. (For the 15 kHz COMPONENT and RGB signals, only C.SYNC is input from Pin 19.)

3. CXA2101 (IC1601), HD Interface

The HD interface is controlled by the I^2C bus. It turns ON/OFF user-controlled COLOR, HUE, SHARPNESS, and DYNAMIC PICTURE functions for signals input, performs detection axis settings, and improves chroma transient, and converts signals to R, G, and B signals then outputs them.
When the DTV (YpbPr, GBR) is input, the Y/Pb/Pr signal G/B/R are input to Pins 11, 10, and 9 respectively. COMPONENT is input to Pin 5 (Y), 4 (Cb), and 3 (Cr). The Video signal is decoded by IC101, and then input to Pins 69 (Y), 68 (Cb), and 67 (Cr).
They are then subject to various controls, converted to R, G, and B signals, and output from Pins 35 (R), 37 (G), and 39 (B).

3-1-2. Signal Path

1. Path of VIDEO signal

The VIDEO and Y/C signals input from CN102 are input to Pins 1, 44, and 43 of IC101 via buffers Q107 (composite video), Q109 (Y), and Q101 (C).
For PAL and NTSC3.58, the signal amplified by two times by IC101 is output from Pin 3, passed through the low pass filter composed of Q120, L111, L110, C211, C210, and C143, input to Pin 2 of IC221 (comb filter), Y/C separated, output from Pins 9, Y, 7, and C, passed through the low pass filter composed of L112, C215, L113, and C219, after which the Y signal is input to Pin 5 of IC101 and the C signal is input to Pin 7. All other signals are processed in IC101, converted to the Y, U, and V signals, and output from Pins 21 (Y), 22 (B-Y), and 23 (R-Y). They are then input to Pins 69, 68, and 67 of IC102 for the above processing by CXA2101, and output.

2. Path of component (Y/R-Y/B-Y) signal, 15kRGB signal

The component video signal input from CN101 is passed through the buffer Q116/ Q115/Q117, and input to Pins 5 (Y), 4 (Cb), and 3 (Cr). The 15kRGB signal is passed through the same path as the component signal, input to Pins 5 (G), 4 (B), and 3 (R) of IC102 for the above processing by CXA2101, and output.

3. Path of HDTV (Y, PB, PR) signal

The Y/Pb/Pr video signal input from CN101 is input to Pins 11 (Y), 10 (Pb), and 9 (Pr) of IC102 via the buffer Q116/115/117 for the above processing by CXA2101, and output.

3-1-3. Path of SYNC Processing

1. When the VIDEO signal is selected

The signal input to IC101 is sync separated internally, and the H and V SYNC from Pins 9 and 4 are output.

The equivalent pulse of the signal output from Pin 9 is eliminated as it is imposed with PLL. After this, it is input to Pins 65 and 66 of IC102, selected, and output from Pins 29 and 28. The H sync output is reversed by IC259, input to IC256, noise-eliminated, output from Pin 7, waveform-rectified by IC257, and output from CN101.

2. For component signal (15K) and 15kRGB signals

The C SYNC signal rectified by the QA board is input to Pin 19 of IC101. The signal output from Pins 9 and 4 are input to Pin 2 of IC1021. The rest is the same process as for Video signals.

3. When HDTV (YPbPr, GBR), components signals other than 15K are input

The signal input from CN101 is input to Pins 11, 7, and 8 of IC102 in the order of Y/G, H, and V. IC102 automatically determines if the signal is SonG, C.SYNC, or HV separate, and outputs the signal from Pins 29 and 28. The rest is the same process as for Video signals.

3-1-4. Clamp Pulse Generation Circuit

1. Path of VIDEO, component (Y/R-Y/B-Y) signal, and 15 kRGB signal

The SGP output from Pin 10 of IC101 is waveform-rectified by IC263, input to IC251, subject to selection with the HDTV signal input, output from Pin 1, reversed by IC252, and output from CN101.

2. When HDTV (YPbPr, GBR), component signals other than 15K are input

The H.sync output from Pin 29 of IC102 is reversed by IC259, and then input to IC256.

Clamp pulses are generated by this IC, output from Pin 5, waveform-rectified by IC259 and IC257, input to IC251, selected, and output from CN101.

3-2. BB Board

The BB board inputs the analog RGB signal from the QA board or digital RGB signal (TMSD:Panel Link) from CN300, converts to the VESA60 equivalent XGA signals, superimposes the OSD signal, and outputs to the BC board.

1. Scan Converter

PW264 (IC303) is used as the scan converter.
This IC incorporates the X86 base CPU core and frame memory SDRAM.
The 4 Mbits (512 KBytes) flash ROM (IC314) is equipped externally as the PROM and 1 Mbit (128 KBytes) SRAM (IC315) as the CPU RAM.

2. The External Data Bus

The external data bus is 16 bits. The CPU operates on 43.333 MHz which is obtained by dividing the 130 MHz memory clock by 3.

3. The External Flash ROM

The program of the external flash ROM can be rewritten by connecting a board for converting the RS-232C level to CN312. In this case, the EXTSW must be connected to GND to switch the communication line, and the WDEN must be connected to GND to stop the operations of the watch dog timer.

4. PW264

PW264 normally operates as a SUB CPU according to the commands from the MAIN CPU on the Y board. The commands are sent by asynchronous serial communication using TXD/RXD.
The OSD data itself is stored in IC314 which is the PW264 memory. Based on the commands from the MAIN CPU, the PW264 selects the contents displayed and superimposes.
To realize high-speed signal switching operations, the MUTE signal is directly sent to PW264.
The INTERLACE detection signal is directly sent from PW264 to Y.
Since PW264 is a X86 based CPU, the RESET signal must be input at a HIGH level.
For this reason, the open drain RESET signal of IC306 is reversed by the Schmidt inverter (IC317).

5. Memory Clock

The 130 MHz memory clock is obtained by multiplying the X300 21.667 MHz by six times.
The internal SDRAM operates on this frequency.

6. Internal Core

As the internal core operates on 2.5 V, D3.3 V is stepped down to 2.5 V and supplied by IC312.

3-3. BC Board

The BC board controls the contrast, bias, W/B, etc. of the linear digital signals from the BBC board, then performs gamma correction by LUT (Look Up Table) and 3D gamma correction which corrects in planes according to the gradation, converts the signals from digital to analog before outputting them.

1. IC502 (CXD9512Q)

IC502 (CXD9512Q) has a 48 bit 2-pixel series input and 30 bit (10 bit/pixel) straight output.
Therefore a 2 clock whose phase matches the input clock is required.

2. IC501 (W152-2G)

IC501 is an IC generating 2 clock corresponding to the frequency diffusion. It outputs the same clock as the input to CLKB and the 2 clock to CLKA according to the phase of the input clock.
IC 500 (Pin 1 of IC501) is incorporated to match the timings of the data and clock.

3. IC503 (M24C64)

IC503 is a 64 Kbits (8 Kbytes) EEPROM memorizing LUT (Look Up Table) and the 3D gamma data. It exchanges data with IC502 using I^2C signals (slave address is A2).

4. IC511 (S80828ANNP-EDR)

IC511 generates RESET signals for IC503.

5. IC505 (TC74LCX125FT)

IC505 is a switching buffer for OSD display of PW264 when outputting the internal signals of IC502 in gamma adjustments, etc.
When PW OSD ENA is LOW, DG07 and DGE7 are sent to ODD_YS and EVEN_ YS respectively to control the ON/OFF of the OSD. DR07 and DRE7 are also sent to ODD_YM and EVEN_YM respectively to control the OSD half tone.
When PW OSD ENA is HIGH, both YM and YS are pulled-down to the LOW level by the resistance, and the OSD of this route goes off.

6. IC506 (ADV7123KST140)

IC506 is a 10-bit D/A converter. It converts gamma corrected digital data to analog signals.
The output when the full-scale (3FFHEX) is input becomes approximately 0.75 Vp-p after termination at 75 Ω of the C board.

7. D500

D500 is an external reference voltage source to improve accuracy. It generates 1.25 ±2 % voltage.
To avoid the effects of the digital circuit and input signal, IC506, D500 receives the supply of analog 5 V from the C board.
Other circuits operate on digital 3.3 V from the BB board.

8. S500

S500 switches the I^2C signal, writes the LUT data using the I^2C signal from the external tool connected to CN503 so that the operations of IC502 (CXD9512) can be controlled directly.
During normal operations, IC502 is connected to the I^2C line from the Y board and is controlled from the main microprocessor.
The slave address of I^2C of IC502 is 76 Hex.

3-4. C Board

3-4-1. Timing Generator

The following timing pulses are generated from the HSO, VSO, and CLOCK by the CXD9512Q of the BC board and supplied to the C board.
In the C board, all signals are level shifted to 5 V and sent via the buffer as well.

HCK1, HCK2: Clock for the H shift register drive of the panel
HST: Start pulse for the H shift register drive of the panel
VCK: Clock for the V shift register drive of the panel
VST: Start pulse for the V shift register drive of the panel
ENB: Enable signal of the gate selection pulse
FRP: Reverses the top and bottom of video signals centering around the reversal pulse and SIG CENT voltage
PRG: Pulse which regulates the width of the first SID level
PCG: Pulse which improves uniformity

RGT: Reverses the left and right of the screen, controls the drive direction of the H shift register
DWN: Reverses the left and right of the screen, controls the drive direction of the V shift register

3-4-2. LCD Driver Control Pulse

INV CONT: Reverses the polarity of the CLK for MCLK
DLY CONT: Adjusts the phase of the CLK for the MCLK in the 180° range
These pulses optimize the sampling phase of the video signal.

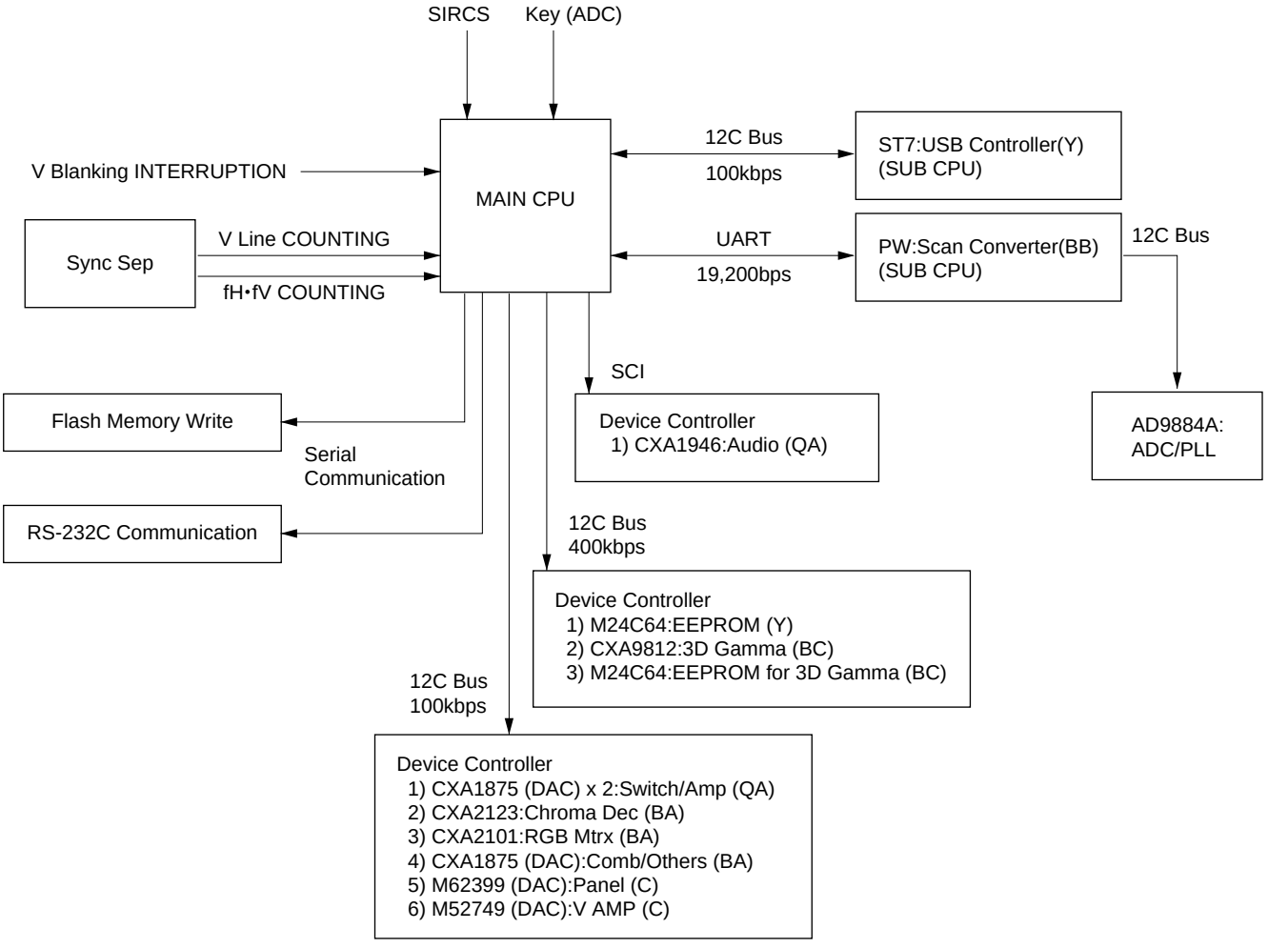
POSCONT1, 2: Adjusts the position of the 1 and 2 outputs for the video input signal.
Sets the optimum timing for inputting signals to the LCD panel through 16 different combinations of the output.

3-5. Y Board

The main circuits of the Y board include the microprocessor peripheral circuit, USB circuit, and IrDA circuit.

3-5-1. Microprocessor peripheral circuit

The controller of the projector is mainly composed of the MAIN CPU, EEPROM, and power supply monitoring IC.



1. MAIN CPU: IC3204 (HD64F2633TE)

16-bit, 1-chip microcomputer.
The operating frequency is Ø =24.576 MHz which is the 12.288 MHz frequency supplied from the external crystal oscillator (X3200) multiplied by two times in the internal PLL.
The memories incorporated are the 256 Kbytes FLASH-ROM and 16 Kbytes RAM.
For the terminal functions of the MAIN CPU and the control contents of the external device, refer to "3-5-4. Terminal Functions of MAIN CPU".

2. EEPROM: IC3203 (M24C64-WMN)

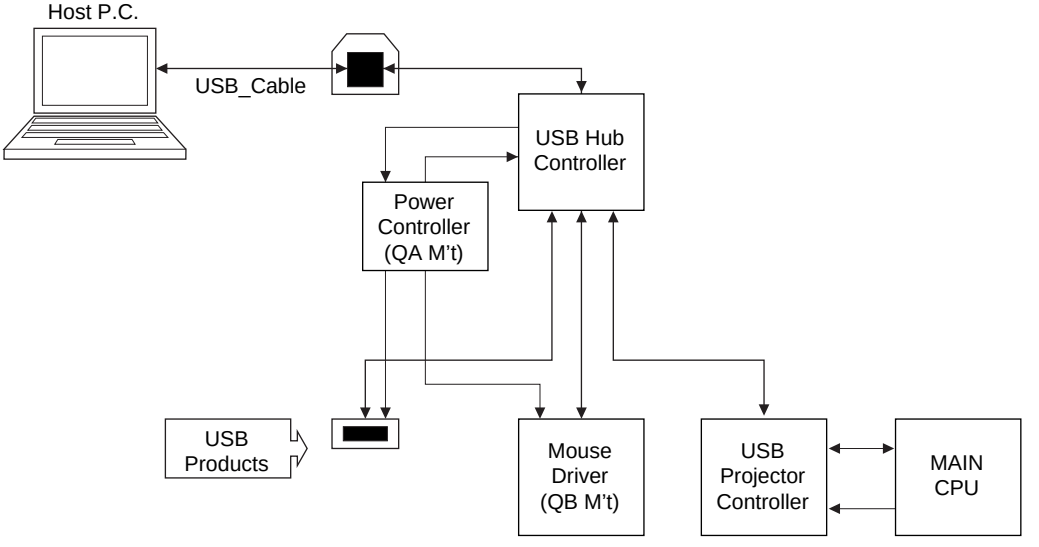
64 Kbits EEPROM controlled by the 400 kHz IC.
Stores the adjustment values of the projector.

3. Power supply monitoring ICs: IC3201, IC3202 (S-80842, S-80828)

The MAIN CPU operates on the Sub+5 V and Sub+3.3 V power supply.
Pin 1 IC3201 monitors the Sub+5 V while Pin 1 IC3202 monitors sub+3.3 V using their respective threshold values of 4.2 V and 2.8 V.
When below these threshold values, the reset signal (active = low) is output from Pin 2 of the monitoring IC, and input to the MAIN CPU reset input terminal (Pin 71 of IC3204).
The CPU is reset by this external reset signal, or the internal reset signal by the WDT (watch dog timer) in the MAIN CPU.

3-5-2. USB Circuit

VPL-PX21/PX31 corresponds to the USB communication as an interface of the personal computer.
The USB circuit mounts the USB hub controller IC and USB projector controller IC in the Y board.
The USB has a tree structure as shown in the figure below.



USB Block

1. USB Hub Controller IC:IC3303 (uPD72012)

The USB communication (US+, US−) from the personal computer is an IC relaying to the USB device connected to the lower level.
When connected to the personal computer with a USB cable, +5 V (VBUS) is supplied from the personal computer, the Q3307 base becomes high, Q3307 turns ON, the Q3306 base becomes low, Q3306 turns ON, and the Q3306 collector voltage≒3.3 V is supplied as the Vcc of IC3303.
When this IC operates normally, the enable signal (active; low) is output to the device in the lower level connected by the down stream (DS) 1, 2, and 3 from Pins 40, 41, and 42.

2. USB Projector Controller IC: IC3304 (ST72T36)

In the USB communication between the personal computer and MAIN CPU of the projector, the enable signal: Low (Pin 42 of IC3303) of the microprocessor cable hub for performing protocol conversion (USB-IC) is input to the Q3310 base, Q3310 goes OFF, this Pin 8 of IC3304 becomes high, and reset is canceled.

The projector control signal executed by the application projector station for the projector on the personal computer is input to Pins 31 and 32 of IC3304 via the HUB (IC3303). This signal is analyzed and sent to the MAIN CPU by I^2C (Pins 24 and 28).

Basically, this IC is the master while the MAIN CPU is the salve.

To send the projector information (input signals, etc.) to the personal computer, the MAIN CPU converts the signal line USB REQ to Low. When this signal is input to Pin 7, this IC requests for projector information using I^2C to the MAIN CPU.

3. IrDA Circuit

The remote control signal (IrDA) received by the infrared photo-sending unit (NF/NR M't) in front and at the back of the projector is input to the IrDA filter IC (IC3301) (NF;Pin 2, NR;Pin 3).

In IC3301, the photo-sensing unit effective signal (NF;Pin 7, NR;Pin 6) by the MAIN CPU is enabled = low, and the signal determined as a useful IrDA signal is output from Pin 5. While it is input as the SIRCS signal to the MAIN CPU via the SIRCS circuit (QD), it is input to Pin 1 of IC3302 (Pin 2 is fixed at low), the reverse signal is output from Pin 7, input to Pin 2 and 6 of IC3002, and Pin 7:IrDA, Pin 3:IrDB are output to the QB board and QC board,

If INPUT-A is selected, the control signal mouse A/B becomes high by the MAIN CPU, and consequently, Pin 1 of IC3002 becomes high (Pin 5:Low), the IrDA signal is output only from Pin 7, and Pin 3 is prohibited.

3-5-3. Memory

Memory structure of VPL-PX21/PX31 series is based on the 600 series, and it is composed of the following five memory blocks.

1. Set memory
2. Status memory
3. Channel memory
4. Chroma memory
5. W/B memory

The 600 series is equipped with the gamma memory, but the current VPL-PX21/PX31 series is no gamma memory. The gamma mode function is realized by applying the offset to the output value of the contrast and the brightness of the devices as X2000 series.

When the power plug is connected to the power line (Standby status), all data inside the internal ROM are written into the NVM (Nonvolatile Memory). When the power is turned on, required data for the current picture, such as status memory data, etc., are selected, and they are written into the internal RAM. When adjustment is carried out, adjustment data are written into the NVM automatically (items on the user mode) or by the trigger of memory operation (items on the service mode and special service mode).

Adjustable items (W/B and Device Adjust) of the service mode and special service mode are memorized into the NVM by the memory operation. At the same time, the factory preset (adjusted) data are all eliminated from the memory.

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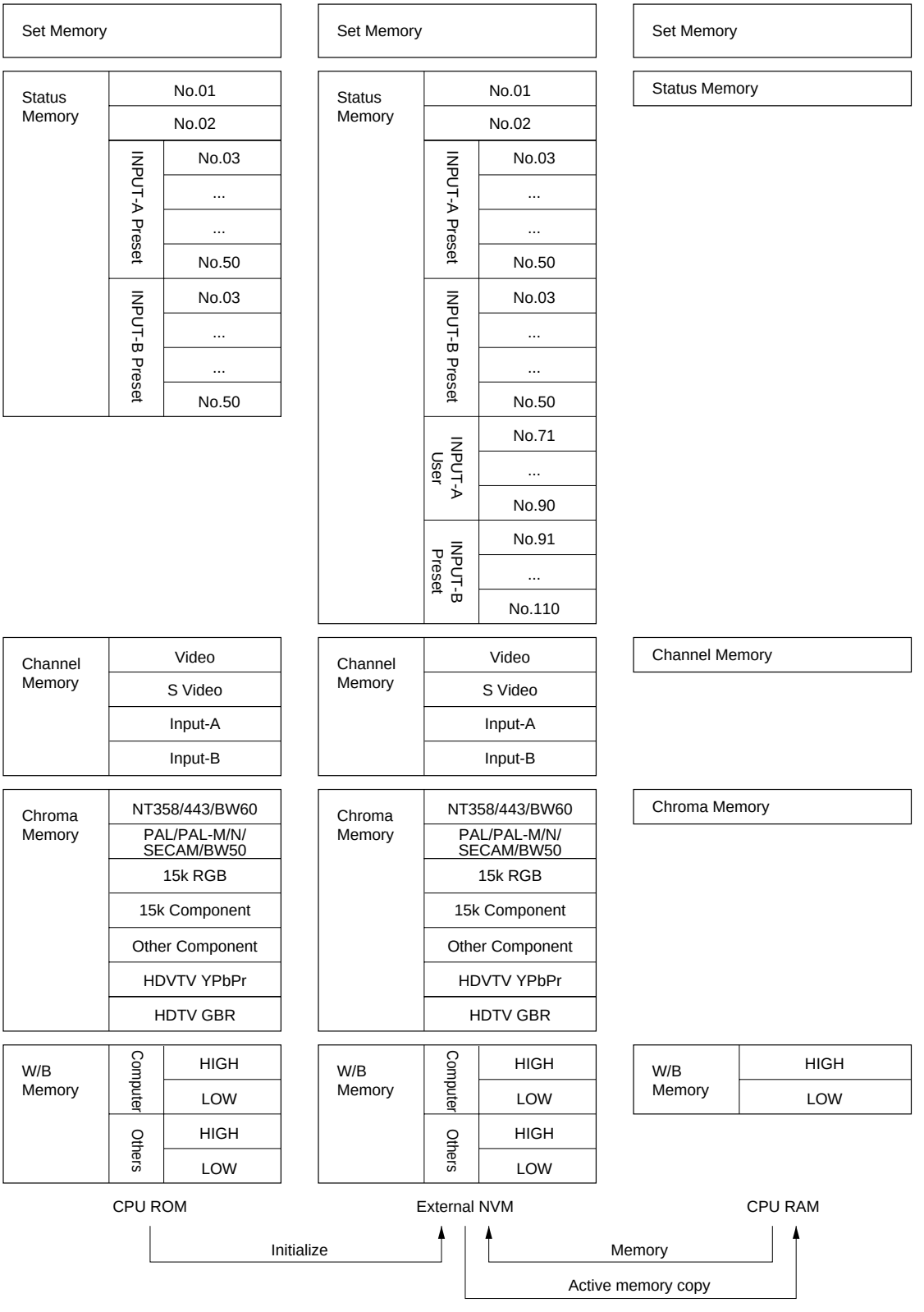
3-5-4. Terminal Functions of MAIN CPU

CPU Internal ROM : 256 kbyte Flash Memory
CPU Internal RAM : 16 kbyte
External NVM Memory: 8 kbyte EEPROM



3-6. Description of QA Board Operations

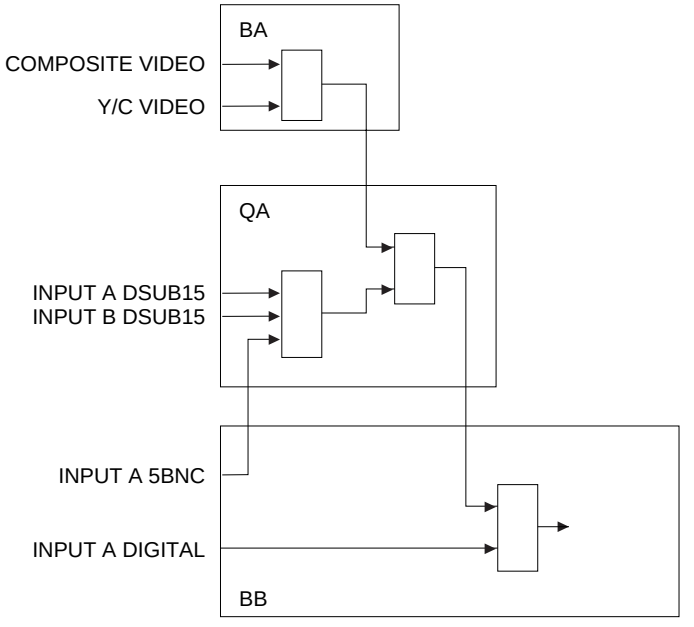
The QA board mainly switches between video signals and audio signals, and performs sync separation.

3-6-1. Switching of Video Signals

The input signals of this model are as follows:

INPUT A	DSUB15 pin analog signal
	5BNC analog signal
	Digital signal
INPUT B	DSUB15-pin analog signal
VIDEO	COMPOSITE
	Y/C

These signals are switched as shown in the following figure.



As shown in the figure, the QA board first switches between INPUT A (DSUB15), INPUT A (5BNC), and INPUT B. The switching is performed by IC823 (RED), 824 (GREEN), and 825 (BLUE). SYNC is performed by IC811. These ICs are controlled by the output of IC806 and IC807 (both DAC) controlled by the CPU using the I^2C bus.

Next the video signals input from the BA board and the RGB signals described above are switched by IC801. This IC amplifies the signal switched by two times, terminates the signal at 75 Ω in the later stage board, and outputs it. This IC is also controlled by IC806.

As described earlier, SYNC is switched by IC811, but the H SYNC input from 5BNC has additional conditions. When the signal input from 5BNC is 15 kHz, it is sync separated by IC805, and input to IC811 in the later stage. If it is not 15 kHz, it is input directly to IC811.

The SYNC selected by IC811 is waveform-rectified by Q821 to Q826, IC812, and IC813.
It is then branched in three ways, output to the BA board, input to IC814 for monitor-out, and input to IC802 for sync separation. After sync separation in IC802, it is switched with the SYNC from the video block by IC803, converted to 3.3 V, and output to the BB board. IC804 fixes the video clamp pulse to a fixed pulse width.

The monitor-out outputs only signals projected to the screen from INPUT A (DSUB, 5BNC) and INPUT B. IC808 to IC810 are amplifiers for monitor-out. IC814 functions as an output buffer for SYNC.

3-6-2. Switching of Audio Signals

Audio signals input are switched by IC819, and volume-controlled. The output of IC819 is separated into that for the monitor-out and that for the speaker-out. The one for monitor-out is input to IC821, and output from CN806 to the QC board. That for the speaker-out is converted to 3 channels by Q836 to Q838. The L and R channel signals are then output to the KS board from CN810 while the mixed L and R signals are output from CN809 to the K board. Q831 to Q835 compose the mute circuit.

3-6-3. Monitoring of the USB Power Supply

The USB download side must be supplied up to 500 mA at 5 V. IC822 monitors this current amount. 5 V power is supplied to the download side from Pin 8 of IC822. When this exceeds 900 mA, the power is stopped, and at the same time, the High signal is supplied from Pin 2 to the USB control IC (IC3303) in the Y board.

IC822 also supplies power to the mouse driver (IC1201) for INPUT A on the QB board.
When a connector is connected to the upload side of the USB, a Low signal is input from the USB control IC (IC3303) on the Y board to Pin 4 of IC822, and a 5 V power is supplied from Pin 5.

3-7. Description of QB Board Circuit Operations

The QB board is composed of the INPUT A input terminal, DDC memory, INPUT A mouse driver, and USB terminal.

3-7-1. INPUT A Input

Three signals are input to INPUT A; analog signal of DSUB15 pin, analog signal of 5 BNC, and digital signal. These signals are switched by SW1201. The analog signal of DSUB15 pin is input from CN1202 and output from CN1203 to the QA board. (An input terminal is provided for the 5BNC analog signal and digital signal in the BB board. These signals are output from this input terminal to the QA board.)

3-7-2. DDC Memory

IC1202 is a DDC memory for INPUT A. This IC is written with EDID data for DDC. When a computer is connected to CN1202, power is supplied to the IC. If the computer connected is DDC compatible, DDC communication is performed.

3-7-3. INPUT A Mouse Driver

IC1201 is a mouse driver for INPUT A. This IC functions when connected to PS/2 and the serial port of the computer, or connected to a Macintosh or NEC 98 series computer by USB. Identification of the mouse of these computers is performed when power is supplied to IC1201. As power is supplied from the computer except when connected by USB, connections can be identified even if AC is not supplied to the unit. When connected by USB, the mouse cannot be identified if no power is supplied to the unit.
The mouse code input from CN1203"A1" is decided by IC1201, and output from CN1201 or J1202 to the computer.

3-8. Description of QC Board Circuit Operations

The QC board is composed of the INPUT B input terminal, DCC memory, INPUT B mouse driver, and monitor-out terminal.

3-8-1. INPUT B Inputs

Unlike INPUT A , only analog signals of DSUB15 pin are accepted. The signal is input from CN1802, and output from CN1804 to the QA board.

3-8-2. DDC Memory

IC1802 is the DDC memory of INPUT B. This IC is written with EDID data for DDC.
When a computer is connected to CN1802, power is supplied to the IC. If the computer connected is DDC compatible, DDC communication will be performed.

3-8-3. INPUT A Mouse Driver

IC1201 is the mouse driver for INPUT A. The operations are basically the same as INPUT A. The only difference is that INPUT B has no USB connection.
The mouse code input from CN1804"A1 and B2" is decoded by IC1801, and output from CN1801 to the computer.

3-9. Description of QD Board Circuit Operations

The functions of this board include buffer of RS-232C communication, reception of remote control signals (CIRCS signal), and video input.

3-9-1. RS-232C Communication

In RS-232C communication, IC1901 is used as the buffer. Signals are connected to the computer by CN1904, and passed through IC1901, CN1903, BB board, and then the Y board for communication with the CPU on the Y board.

3-9-2. Reception of Remote Control Signals

Signals from the remote controller connected by cable are input from J1902.
They are then inverted by Q1904, and output from Pin 5 of CN1903 to the Y board.
If not connected by remote control cable, signals received by the NF and NR boards are input from Pin 6 of CN1903, passed through J1902, and output from Pin 5 of CN1903 to the Y board again.

3-9-3. Video Input

Video signals are input from J1901, and output from CN1901 to the BA board.
The video audio signals are output from CN1902 to the QA board.

3-10. Description of K Board Circuit Operations

This board amplifies audio signals and outputs them to the main speaker.

Signals input from Pin 1 of CN2900 are amplified by IC2900 and output to the main speaker from CN2903.
Pin 3 of CN2900 inputs mute signals. When this line is High (about 4.5 V), no more signals are output to the speaker.

3-11. Description of KS Board Circuit Operations

This board amplifies audio signals and outputs them to the sub speaker.

Signals input from Pins 3 and 5 of CN2951 are amplified in IC2950, passed through the H board from CN2952, and output to the sub speakers.

Pin 7 of CN2951 inputs mute signals. When this line is High (about 4.5 V), no more signals are output to the speaker.

3-12. Voltage Map of F, GA, GB, GC and GD Boards

3-12-1. Voltages Map of F, GA, GB, GC and GD Boards

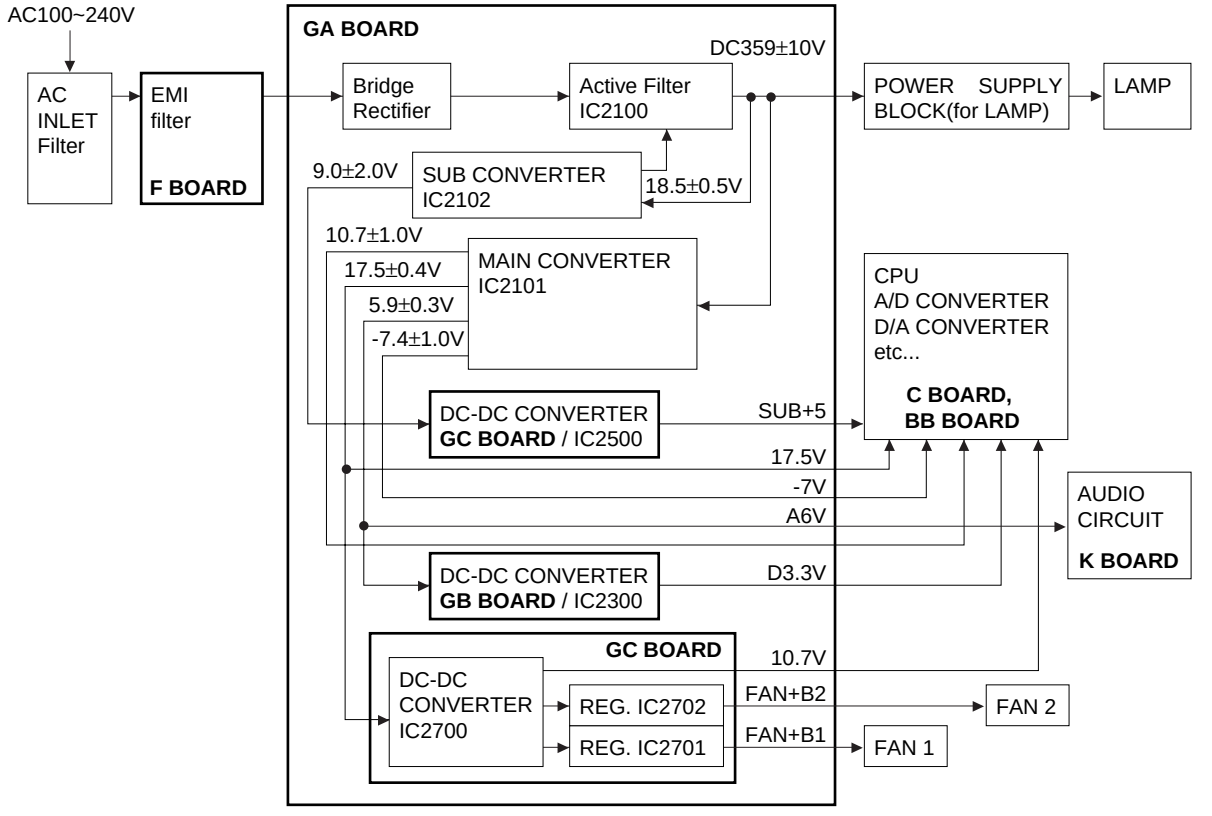


Fig. 1 Voltages Map

3-12-2. F Board

The EMI filter is composed of the one level of LFT.
The fuse (F2000) uses 6.3 A/250 V regardless of whether it is 100 V or 200 V. (The fuse has satisfied the safety standard.)

3-12-3. GA Board

1. Structure

- **Active Filter**
  The active filter improves the power factor of the AC voltage after bridge rectification, and at the same time, serves as a step-up converter and supplies DC358 ±10 V to the lamp power supply in the later stage, sub converter, and main converter. However, when the maximum AC voltage exceeds the output voltage of the active filter, the power factor will not be improved correctly.

- **Inrush Current Limit Circuit**
  When the AC voltage is supplied with the electric load of the smoothing capacitors C2112 and C2113 fully discharged, the inrush current flows to the capacitor, and as a result, damage the fuse in the input stage. To prevent this, immediately after inputting the AC voltage, the inrush current is limited by R2101. After the operations of the standby converter start, the thyristor D2102 turns ON and short-circuits the two edges of R2101.

- **Sub converter**
  The DC voltage obtained by completely rectifying the AC voltage or the output voltage of the active filter is stepped-down to the GC board input voltage and the VCC for the active filter control IC. These operations are controlled by IC2102.
  - VCC (18.5 ±0.5 V)
  - GC board input voltage (9.0 ±2.0 V)
    ( ) shows the potential of the connector.

- **Main converter**
  The output voltage of the active filter is stepped-down to the following signal circuits and AUDIO circuit. These operations are controlled by IC2101.
  - AUDIO +B (10.6 ±0.2 V) However, when no load, the voltage is clamped to about 17.8 V by the diode.
  - 17.5 V (17.5 ±0.2 V)
  - A 6 V (5.9 ±0.2 V)
  - −7 V (−7.4 ±1.0 V)

- **Power protector**
  Normally, when the main converter is operating, GA/Q2107 turn ON, and the microprocessor port of the Y board is kept “Low”. When the output voltage lines and GND line of the main converter are short-circuited, GA/Q2107 goes OFF, and the microprocessor port of the Y board is set to “High”. Furthermore, the microprocessor sets the POWER ON signal to “Low”, and stops the operations of the main converter. (At this time, both the TEMP and LAMP LEDs of the control panel light up.)

2. Operations of the Active Filter

- **ON/OFF operations**
  The active filter starts operations at the same time as the main converter in the later stage. At standby, Q2106 maintains Pin 8 of IC2100 at “Low”, and the active filter does not operate. When the “High” signal is received from the microprocessor of the Y board, Pin 7 of CN2106 becomes “High”, Q2106 goes OFF, Q2104 turns ON, and Q2105 also turns ON. As a result, VCC is supplied to IC2100 and IC2100 starts operating.

3. Basic Operations

In conventional rectification circuits which do not use the active filter, peak recharge current is generated in a part of the AC voltage waveform due to the capacity components of the smoothing capacitor. This causes such problems of the effective power such as later phase power consumption, high frequency, etc., and may cause subsequent problems in other equipment. To prevent this, this power supply circuit is equipped with a step-up DC-DC converter in the smoothing circuit and adopts an active filter which compares the input current waveform with the input voltage waveform by appropriate control.

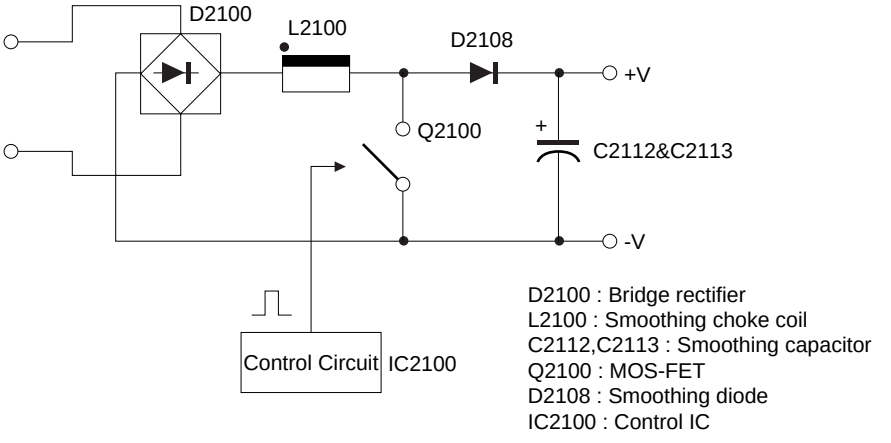


Fig. 2 Principle of Active Filter

Fig. 2 shows the principle of the active filter circuit. When MOS-FET (Q2100) turns ON, energy is accumulated in the choke coil (L2100). When it goes OFF, energy is discharged, and current flows to the load side.
Fig. 3 shows the relation between the voltage and current. The average input current for each switching period of the MOS-FET (Q2100) is half of the peak current flowing to the choke coil (L2100). Since these peak values can be placed on the curve proportionate to half the AC voltage input, they appear like resistance load on the AC voltage from the input side of the active filter.

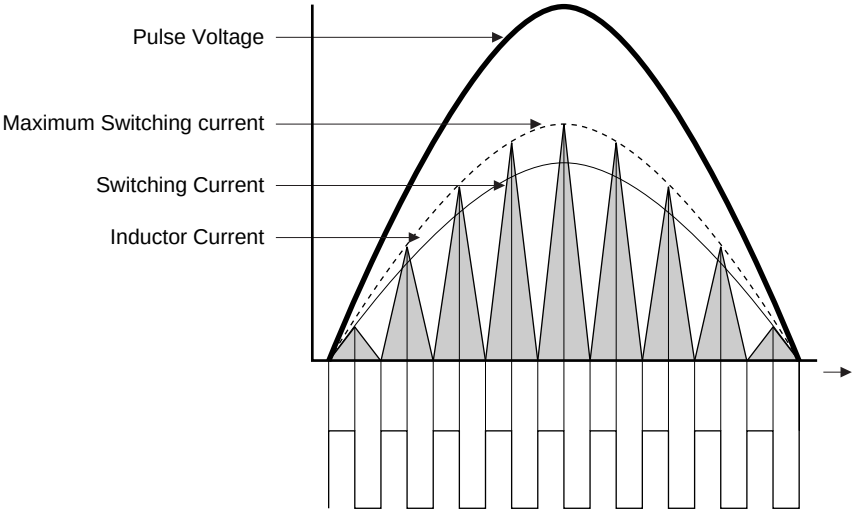


Fig. 3 Pulse Voltage and current

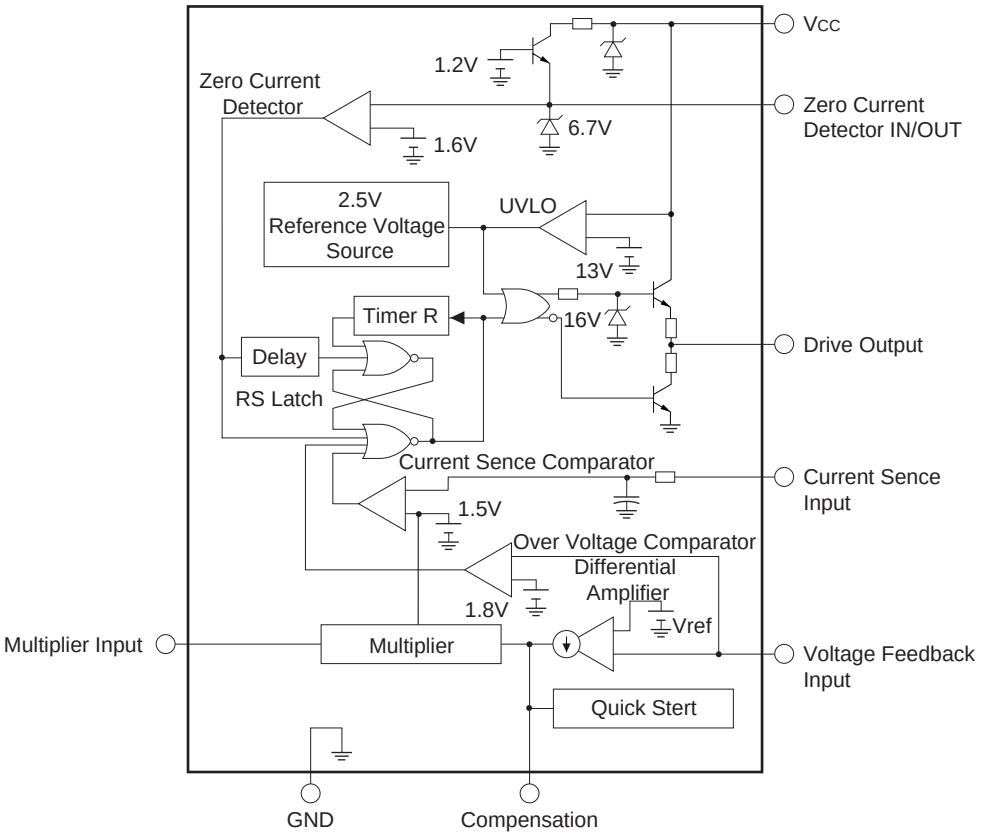


Fig. 4 Simple Block Diagram of IC2100

Fig. 4 show a simple block diagram of the active filter control (IC2100). The current flowing to MOS-FET (Q2100) is detected by the sense resistor (R2106). When this current reaches the threshold value corresponding to the peak current flowing to the choke coil (L2100), the comparator turns OFF the MOS-FET (Q2100). The threshold value is sent to the comparator as the product of the AC voltage waveform and control amplifier output voltage V0. The MOS-FET (Q2100) maintains the OFF state until the choke coil (L2100) and diode (D2108) current becomes zero. The output is maintained at 358 ±10 V by the PWM control of the switching. This output setting is performed by the R2127 to R2133 voltage-dividing resistor.

4. Timer function

As a watchdog timer function is equipped inside the IC2100, no external oscillator is required. When the current flowing to the choke coil (L2100) reaches zero and the drive output becomes OFF for more than 620 μs, the timer automatically starts or restarts the pre-converter.

5. Internal over-voltage comparator

To prevent abnormal output voltages, the control IC (IC2100) is equipped with an over-voltage comparator. This comparator turns ON at initial startup, when the load changes suddenly, and when the output ripple increases. The over-voltage comparator monitors the peak output voltage of the converter, and turns OFF the MOS-FET (Q2100) immediately when the reference value is exceeded. The threshold value of the comparator is set to 1.08 V in the control IC (IC2100).

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6. External over-voltage protection circuit

In case the internal over-voltage comparator does not function when the control IC (IC2100) performs abnormal operations, an over-voltage protection circuit composed of the shunt regulator (IC2105) has been equipped externally. The output voltage is monitored by the voltages of the two ends of R2177. When this potential reaches 2.495 (428 V output voltage), IC2105 turns ON, to turn OFF the control IC (IC2100) operating the latch circuit composed of Q2106 and Q2102.

7. External pre-drive circuit

The control IC (IC2100) is equipped with a totem pole output stage, but due to the selection of a surface mounted device, strong heat is generated when a large input MOS-FET is driven. To suppress this heat, the pre-drive circuit composed of Q2109 and Q2110 has been added in front of the MOS-FET Q2100.

8. Details of parts

L2000	Choke coil for eliminating the noise components of the common mode.
D2100	Bridge rectification diode rectifying the AC voltage to both waveforms. Taking into account the voltage changes in the market, the 800 V voltage resistor was used.
R2101	Resistor limiting the bridge current when AC voltage is input.
D2102	Thyristor short-circuiting R2101 when the main converter is operating.
Q2100	MOS-FET for switching the active filter. Performs switching by the PWM control of IC2100. Taking into account the heat generated by power loss, the current capacity of 16A is driven in series.
L2100	Choke coil for the active filter. Accumulates energy when Q2100 is ON and supplies current to the later stage when OFF.
D2108	Rectification diode for the active filter. A fast recovery diode is used for high voltage tolerance and high speed ON/OFF.
C2112, C2113	Smoothing capacitor for the active filter. Rectifies the half waveform after bridge rectification during standby. DC voltage is supplied to the sub-converter in the later stage. Recharges and discharges the step-up converter when the active filter is operating.
IC2100	Controls the operations of the active filter.
R2101	Current detection resistor. The current flowing to the active filter is input to IC2106 by the voltage of the two ends of this resistor.

3-12-4. Main Converter

1. ON/OFF Operations of the Main Converter

The main converter control IC is IC2101. During standby, Q2103 maintains the ON state. As the IC2101 of CONTROL terminal is Low, the main converter does not operate. When the “High” signal is received from the microprocessor at power ON of Pin 7 of CN2106, Q2103 goes OFF, and the main converter starts operating.

2. Basic operations of the main converter

The main converter is composed of the self-excited forward converter operating on the DC voltage received from the active filter.
The switching and control are performed by IC2101. The oscillating frequency is fixed to about 100 kHz by the internal oscillator for PWM control.

- Transformer secondary operations

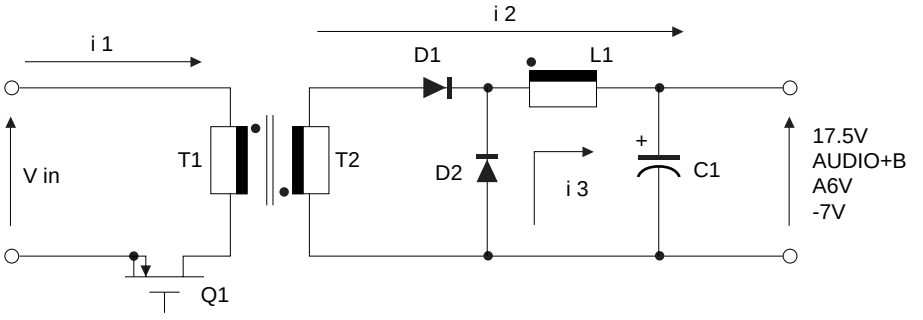


Fig. 5 Principle of Operations of Main Converter

When Q1 (built-in FET of IC2101 in this case) turns ON, the output voltage of the active filter is supplied to the primary line (T1) of the transformer. At the same time, voltage is induced according to the number of coils in the secondary coiled line (T2).
As the secondary side rectification diode (D1) is biased in the normal direction, the current i2 is supplied. This current flows along the path for recharging the smoothing capacitor (C1) in the order of D1, L1, and C1. The inductance (L1) at this time is accumulated with PL energy.
Next, when Q1 goes OFF, no voltage Vin is transmitted from the primary side. Based on the PL energy accumulated when Q1 is ON, reverse power is generated in the inductor (L1). The current i3 from the inductor (L1) flows from L1 to C1, and then to D2, and while Q1 is OFF according to the PL energy above.

3-12-5. Basic Operations of Sub-Converter

Composed of the RCC (Ringing Choke Converter) which can operate by the DC voltage obtained by completely rectifying the AC voltage or the output voltage of the active filter. This switching and control are performed by IC2102. The oscillating frequency is fixed at about 100 kHz by the internal oscillator for PWM control. During standby, voltage is supplied to the GC board generating the SUB5 V for the microprocessor, and the VCC of the control ICs are also supplied when the main converter and active filter are operating (POWER ON).
When DC voltage is supplied between Pins 5 and 7 of the transformer T2101, a voltage corresponding to the number of coils is induced between Pins 8 and 9 of the transformer. IC2102 controls PWM so that the CONTROL terminal is always 5.7 V (TYP).

3-12-6. Details of Parts

R2139, R2140	Resistors for protecting the main and standby converters. When a problem occurs in the later stage circuit, the line is opened to protect other parts.
IC2102	Control IC of the sub converter. Comes in the same package as the PWM control IC and 700 V MOS-FET.
T2102	Switching regulator transformer for the sub-converter. As it is of the flyback type, the secondary side goes OFF when the primary side is ON, and vice versa.
D2118, D2121	Snubber circuit of the sub converter. The noise is suppressed by the switching pulse of the sub converter.
IC2101	PWM control IC of the main converter.
T2100	Switching regulator transformer for the main converter. As it is of the forward type, when the primary side is ON, the secondary side also turns ON, and when the primary side is OFF, the secondary side also goes OFF.
R2145, R2146, R2147, C2121, D2119	Reset circuit of the main converter. Snubber circuit which consumes the exciting current accumulated in the primary coil of T2100 for every switching pulse.
D2124, D2134, S2135, D2136, D2137, D2138, D2139, D2127, D2129, D2132, D2128, D2130, D2131	Diode for the secondary rectification of the main converter.
L2105, L2106, L2107, L2108, L2101, L2109, L2102, L2103	Choke coil for the main converter.

3-12-7. GB, GC, and GD Boards

1. Structure

The GB, GC, and GD boards are each composed of the DC-DC converter for step-down voltage as shown below.

GB board : 5.9 ±0. 3V→3.3 ±0.3 V
GC board : 9.0 ±2.0 V→5.0 ±0.3 V
GD board : 17.5 ±0.4 V→10.6 ±0.3 V

2. Operations of the DC-DC Converter

As the structure of each DC-DC converter is more or less the same, the basic circuit operations are described here.

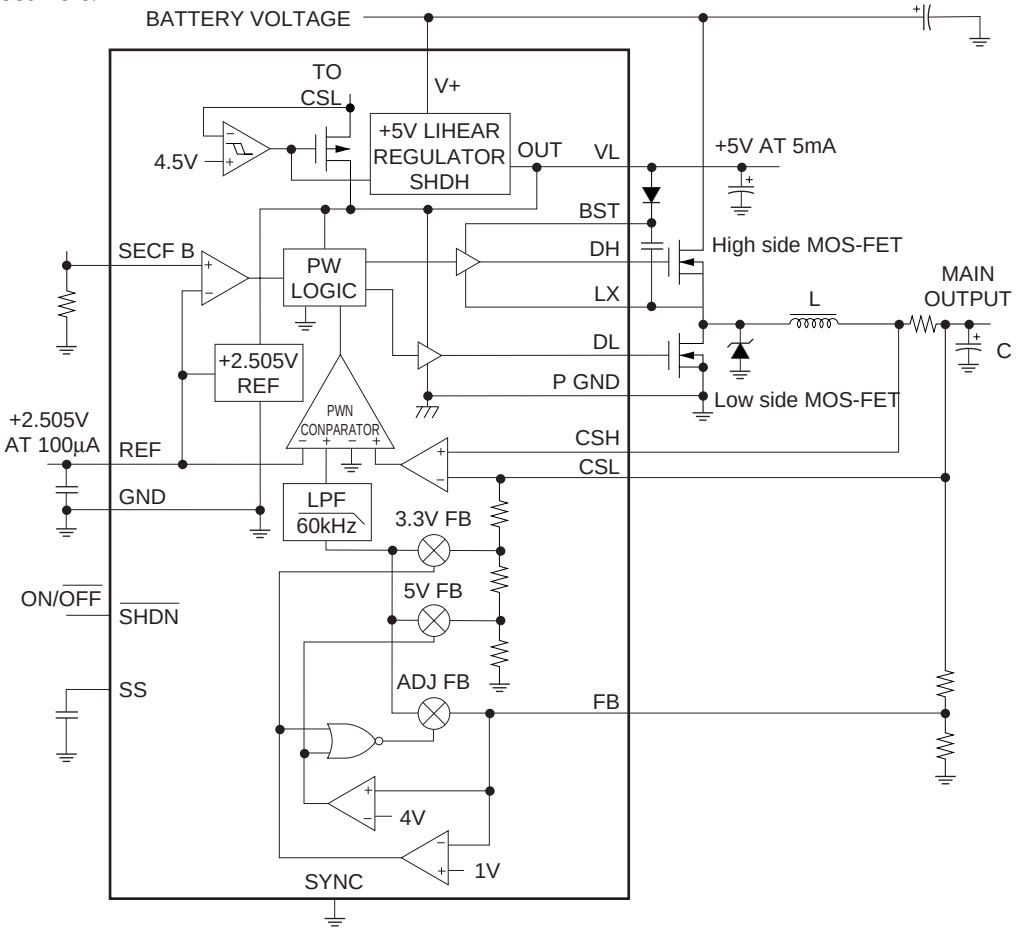


Fig. 6 DC-DC Converter Control Circuit

Fig. 6 shows the DC-DC converter control circuit structure. This converter adopts the step-down chopper method in which the input voltage is directly switched by two MOS-FETs.
In moderate loads, the DC-DC converter sets into the idling mode and skips most of the internal oscillator pulses to decrease the switching frequency and reduce MOS-FET switching losses.
In heavy loads, the converter controls the MOS-FET pulse width used for switching, and turns ON the High side MOS-FET only for the time determined by the duty ratio.
When the MOS-FET at the High side goes OFF, the Low side MOS-FET turns ON after 60 ns. The Low side MOS-FET maintains the ON state until the current flowing to the L inductor zero-crosses.
The aim of these operations is to attain high efficiency in both moderate and heavy loads.

When the potential difference between Pin 8 (CSH) and Pin 9 (CSL) of the control IC exceeds 100 mV due to shorting of the load, etc., the control IC internal current restriction circuit stops PWM LOGIC and turns OFF the High side MOD-FET.

3. GC Board (SUB5 V DC-DC converter)

The GC board is input with the secondary side output voltage (9.0 ±2.0 V) of T2101 from when the power supply voltage is input. It steps down the standby voltage 5.0 ±0.3 V supplied to the microprocessor by the DC-DC converter (IC2500) and outputs it.
The GB board receives and transmits the POWER ON signal, and POWER PROT signal.

4. GB Board (D3.3 V DC-DC Converter)

The GB board is input with the secondary side output voltage A6 V (5.9 ±0.3 V) of T2100 when the power is turned ON. It steps-down the D3.3 V (3.3 ±0.3 V) supplied to the signal circuit using the DC-DC converter (IC2300), and outputs it.

5. GD Board 10.7 V DC-DC Converter and FAN+B1, 2 Regulator

The GD board is input with the secondary side output voltage 17.5 V (17.5 ±0.4 V) of T2100 when the power is turned ON. It steps-down the 10.7 V (10.6 ±0.3 V) supplied to the signal circuit using the DC-DC converter (IC2700), and outputs it.
The GD board is mounted with a regulator (IC2701, IC2702) which inputs the above 10.7 V and steps-down the voltage FAN+B1, 2 for the suction and exhaust FAN. The microprocessor of the Y board reads the resistance value of the thermistor (TH2020) (resistance value changes according to the temperature) mounted on the S board and outputs the 0 to 5 V voltage from the port to Pins 7 and 9 of CN2701 of the GD board.
By adding the current based on the voltage to the ADJ terminal of the regulators (IC2701 and IC2702), the suction FAN controls the 10.2 V to 6 V (FAN+B1) while the exhaust FAN controls the 10.2 V to 7 V (FAN+B2) voltage. The thermistor TH2020 mainly monitors the external temperature of the unit. When the LAMP MODE STANDARD mode is selected on the menu, both fans are set to the minimum voltage of FAN 7 V for the suction FAN and 8 V for the exhaust Fan. When the LAMP MODE LOW mode is set, the fans are set to the minimum voltage of FAN 6 V for the suction FAN and 7 V for the exhaust Fan.

Section 4
Electrical Adjustments

4-1. Equipment Required

- Oscilloscope
  Tektronix 2465 or equivalent
  (bandwidth: 350 MHz or more)
- NTSC, PAL, SECAM component signal generator
  Tektronix TG2000 + AVG1 (optional module)
  +AWVG1 (optional module) or equivalent
- VG (Programmable video signal generator)
  VG814 or equivalent
- Digital voltmeter
  Advantest TR6845 or equivalent
- Luminance meter

4-2. Preparations

4-2-1. Turning on the Power

1. Connect the power cord and supply the power to the unit.
2. Check that the STANDBY LED of the control panel lights up in red.

Note: Perform the following adjustments at least 5 minutes after turning on the power.

4-2-2. Setting the Factory Mode

1. Check that the STATUS in the menu is ON.
2. Exit the Menu.
3. Press the keys in the following order:
   "ENTER" → "ENTER" → "←" → "ENTER".
   The message "Do you with to enter into the FACTORY MODE?" will be displayed.
   Select YES on the menu to set the unit into the factory mode.

4-3. C Board Adjustments

4-3-1. R VCOM Adjustments

Turn off the menu using the STATUS OFF during adjustments. (No shield is required.)

1. Enter the R DRV of the device adjust by the factory mode and check the 1 line ON/OFF signal.
2. Adjust the "←" and "→" keys to minimize the flicker.

4-3-2. G VCOM Adjustments

1. Enter the G DRV of the device adjust by the factory mode and check the 1 line ON/OFF signal.
2. Adjust the "←" and "→" keys to minimize the flicker.

4-3-3. B VCOM Adjustments

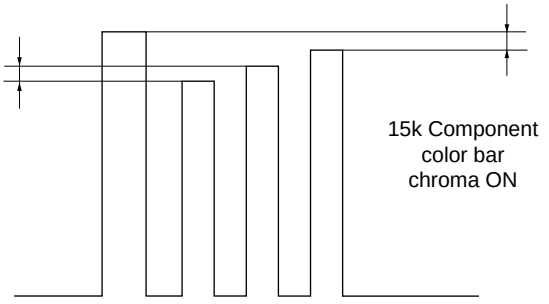
1. Enter the B DRV of the device adjust by the factory mode and check the 1 line ON/OFF signal.
2. Adjust the "←" and "→" keys to minimize the flicker.

4-4. Signal Level Adjustments

4-4-1. Component Level Adjustments

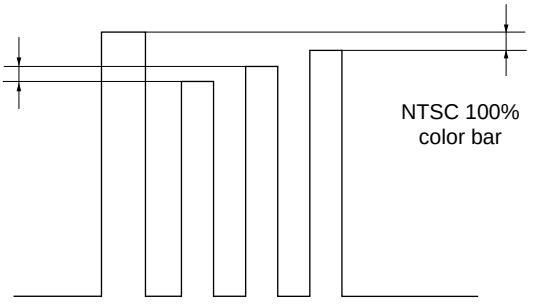
1. Connect the component signal to INPUT-A (5BNC), and select COMPONENT with SIGNAL SELECT. (15K Component color bar Chroma ON)
2. Set the COLOR to 40.
3. Connect the oscilloscope to TP605 (B OUT) on the C board.
4. Enter the OTHER of the device adjust of the menu.
5. Set 06 3D GAMMA/TROUGH:0 to 06 3D GAMMA/TROUGH:1.
6. Set 07 GAMMA/SW:1 to 07 GAMMA/SW:0.
7. Adjust the cursor at the top of the oscilloscope to the bar on the left side (white section).
8. Adjust GND level to the bottom edge in the DC 0.5 V range.
9. Set the input signal to component color bar.
10. Select 12 YUV COL. Adjust the "←" and "→" keys so that the levels of the right bar and the left bar become the same.
11. Select 05 SUB HUE. Adjust the "←" and "→" keys so that the two bars at the center become flat.

12. Press the ENTER key to select the SAVE TO MEMORY of the menu, and press the ENTER key again to save the data.



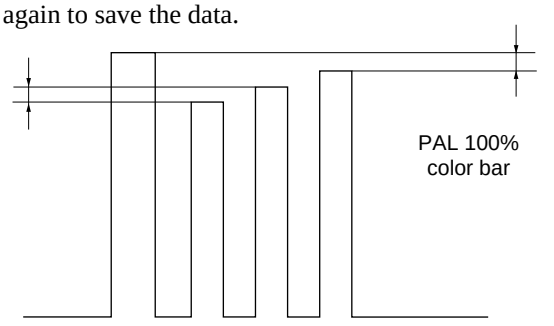
4-4-2. VIDEO NTSC Level Adjustments

1. Set the Color to 40. Input the NTSC 100 % Color bar signal to the VIDEO input, and switch the input to VIDEO.
   The RGB MATRIX of device adjust of the menu is set.
2. Connect the oscilloscope to TP605 on the C board.
3. Select 12 YUV COL, and adjust the "←" and "→ " keys so that the levels of the right bar and left bar become the same.
4. Select 05 SUB HUE, and adjust the "←" and "→" keys so that the two bars at the center become flat.
5. Press the "ENTER" key to select the SAVE TO MEMORY of the menu, and press the "ENTER" key again to save the data.



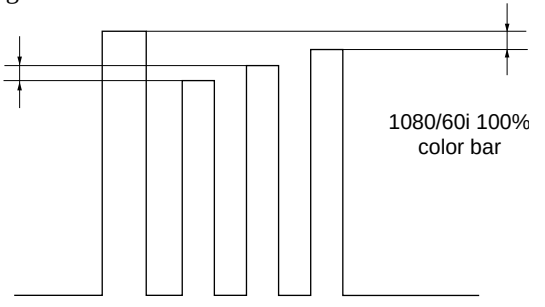
4-4-3. VIDEO PAL Level Adjustments

1. Set the Color to 40. Input the PAL 100 % Color bar signal to the VIDEO input.
   BA MATRIX of device adjust on the menu is set.
2. Connect the oscilloscope to TP605 on the C board.
3. Select 12 YUV COL, and adjust the "←" and "→" keys so that the levels of the right bar and left bar become the same.
4. Select 04 SUB HUE, and adjust the "←" and "→" keys so that the two bars at the center become flat.
5. Press the "ENTER" key to select the SAVE TO MEMORY of the menu, and press the "ENTER" key again to save the data.



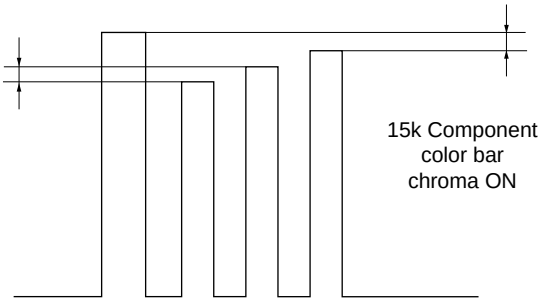
4-4-4.Y/PB/PR Level Adjustments

1. Set the Color to 50.
2. Input the HDVS (1080/60i) 100 % Color bar (YPbPr) signal to INPUT-A, select INPUT-A, and select Y/PB/PR using SIGNAL SELECT.
3. Set RGB MATRIX of Device adjust on the menu.
4. Select 11 YUV COM, and adjust using the "←" and "→" keys so that the level of the left bar becomes the same as the level of the cursor at the top.
5. Select 12 YUV COL, and adjust using the "←" and "→" keys so that the levels of the right bar and left bar become the same.
6. Select 04 SUB HUE, and adjust using the "←" and "→" keys so that the two bars at the center become flat.
7. Press the "ENTER" key to select the SAVE TO MEMORY of the menu, and press the "ENTER" key again to save the data.



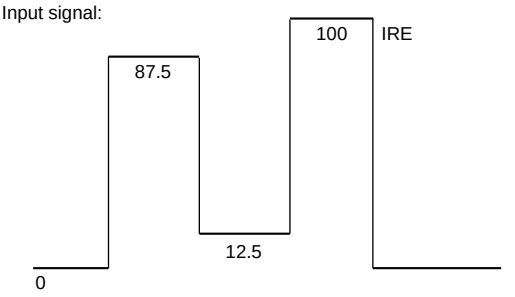
4-4-5. 15KRGB Level Adjustments

1. Set the Color to 40.
2. Input the 15K RGB 100 % Color bar signal to INPUT-A, select INPUT-A, and select RGB using SIGNAL SELECT.
3. Set RGB MATRIX of Device adjust on the menu.
4. Select 11 YUV COL, and adjust using the "←" and "→" keys so that the levels of the right bar and left bar become the same.
5. Select 12 YUV COL, and adjust using the "←" and "→" keys so that the levels of the right bar and left bar become the same.
6. Select 05 SUB HUE, and adjust using the "←" and "→" keys so that the two bars at the center become flat.
7. Press the "ENTER" key to select the SAVE TO MEMORY of the menu, and press the "ENTER" key again to save the data.

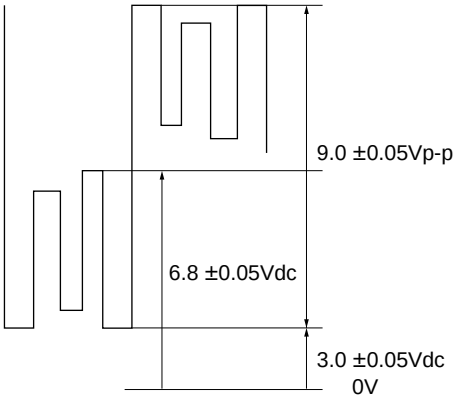


4-4-6. Adjustment of Signal Amplitude and Signal Center

1. Input a W/B HIGH adjustment (XGA) signal to INPUT-A and connect an oscilloscope to TP610 on the C board.



2. Enter OTHER of Device adjust in the menu.
3. Set 07 3D GAMMA/SW:1 to 07 3D GAMMA/SW:0.
4. Enter P DRV of Device adjust in the menu.
5. Adjust the amplitude of a signal to 9.0 ±0.05 Vp-p by 14.VAMP/BRT.
6. Adjust the lower edge of a signal to 3.0 ±0.05 VDC by 4.SIG.CENT.

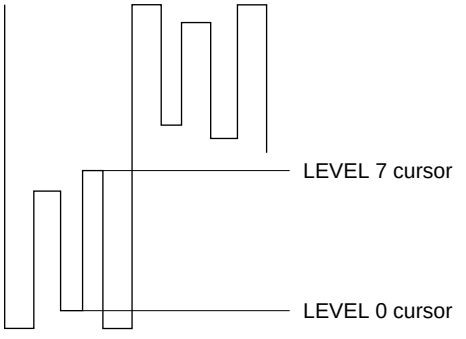


7. Enter GAMMA of Device adjust in the menu.
8. Set to LEVEL 7.
9. Adjust LEVEL 7 to 6.8 ±0.05 VDC by 12.VAMP/ SUB CON G.
10. Connect an oscilloscope to TP617 on the C board.
11. Adjust LEVEL 7 to 6.8 ±0.05 VDC by 11.VAMP/ SUB CON R.
12. Connect an oscilloscope to TP616 on the C board.
13. Adjust LEVEL 7 to 6.8 ±0.05 VDC by 13.VAMP/ SUB CON B.
14. Return 07 3D GAMMA/SW:0 to 07 3D GAMMA/ SW:1.
15. Select SAVE TO MEMORY in the menu and press the "ENTER" key to save data.

4-5. W/B Adjustment

4-5-1. RGB W/B HIGH Adjustment

1. Input a W/B HIGH adjustment (XGA) signal to INPUT-A and select “COMPUTER” by signal setting.
2. Set CONTRAST to 80.
3. Enter OTHER of Device adjust in the menu.
4. Set 06 3D GAMMA/THROUGH:0 to 06 3D GAMMA/THROUGH:1.
5. Set 07 3D GAMMA/SW:1 to 07 3D GAMMA/SW:0.
6. Enter GAMMA of Device adjust in the menu.
7. Connect an oscilloscope to TP610 on the C board.
8. Display LEVELS 0 and 7 and memorize them in the cursor on an oscilloscope.
9. Display LEVEL 0 and memorize it in the cursor on an oscilloscope.
10. Input a W/B HIGH adjustment (XGA) signal to INPUT-A.
11. Enter WB ADJUST HIGH from the menu.
12. Adjust gain G so that the DC level in the 100 IRE portion of a W/B HIGH adjustment (XGA) signal coincides with the memorized LEVEL 7.
13. Adjust bias G so that the DC level in the 12.5 IRE portion of a W/B HIGH adjustment signal coincides with the memorized LEVEL 0.
14. Perform the tracking adjustment.
15. Connect an oscilloscope to TP617 on the C board.
16. Adjust gain R and bias R in the same procedure of steps 8 to 14.
17. Connect an oscilloscope to TP616 on the C board.
18. Adjust gain B and bias B in the same procedure of steps 8 to 14.
19. Select SAVE TO MEMORY on the W/B ADJUST page of the menu and press the “ENTER” key to save data.



4-5-2. RGB W/B LOW Adjustment

1. Enter W/B ADJUST LOW from the menu.
2. Copy the adjustment value in the HIGH mode directly to the R/G/B bias.
3. Write the adjustment values, processed in the HIGH mode as described below, in the R/G/B gain.
   R GAIN +5
   G GAIN −5
   B GAIN −15
4. Select SAVE TO MEMORY on the W/B ADJUST page of the menu and press the “ENTER” key to save data.
5. Enter OTHER of Device adjust in the menu.
6. Return 06 3D GAMMA/THROUGH:1 to 06 3D GAMMA/THROUGH:0.
7. Return 07 3D GAMMA/SW:0 to 07 3D GAMMA/SW:1.
8. Select SAVE TO MEMORY on the Device adjust page of the menu and press the “ENTER” key to save data.

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4-5-3. Component W/B HIGH Adjustment

1. Input a component flat field signal to INPUT-A, select INPUT-A, and then select COMPONENT by the set INPUT-A.
2. Set to 06 3D GAMMA/THROUGH:0. (LUT ON)
3. Set to 07 3D GAMMA/SW:1. (3Dγ ON)
4. Enter WB ADJUST HIGH from the menu.
5. Copy the adjustment value in the RGB HIGH mode to the gain and bias.
6. Input a component flat field 80 IRE signal to INPUT-A.
7. Adjust the y value by the G gain of W/B HIGH. If the x value obtained when the y value is adjusted is higher than the specified value, blue is used as the reference color. If it is lower than the specified value, red is used as the reference color. Adjust so that the chromaticity below is obtained by the gain of colors other than the reference color.
8. Input a component flat field 30 IRE signal to INPUT-A.
9. Adjust so that the chromaticity below is obtained by the bias of colors other than the reference color.
10. Perform the tracking adjustment so that 80 IRE and 30 IRE satisfy the specified value.
11. Select SAVE TO MEMORY on the W/B ADJUST page of the menu and press the “ENTER” key to save data.

4-5-4. Component W/B LOW Adjustment

1. Input component flat field signal to INPUT-A.
2. Enter WB ADJUST LOW from the menu.
3. Copy the adjustment value in the RGB HIGH mode to the gain and bias.
4. Input a component flat field 80 IRE signal to INPUT-A.
5. Adjust the y value by the G gain. If the x value obtained when the y value is adjusted is higher than the specified value, blue is used as the reference color. If it is lower than the specified value, red is used as the reference color. Adjust so that the chromaticity below is obtained by the gain of colors other than the reference color.
   x value = 0.275 ±0.005
   y value = 0.312 ±0.005 (30IRE: ±0.007)
6. Input a component flat field 30IRE signal to INPUT-A.
7. Adjust so that the chromaticity below is obtained by the bias of colors other than the reference color.
8. Perform the tracking adjustment so that 80 IRE and 30 IRE satisfy the specified value.
   x value = 0.283 ±0.005
   y value = 0.331 ±0.005 (30IRE: ±0.007)
9. Select SAVE TO MEMORY on the W/B ADJUST page of the menu and press the “ENTER” key to save data.

4-6. Adjustments in Replacement of Prism and Optical Unit

After replacement of the prism, set the factory mode, and perform the following adjustment.

4-6-1. VCOM Adjustment

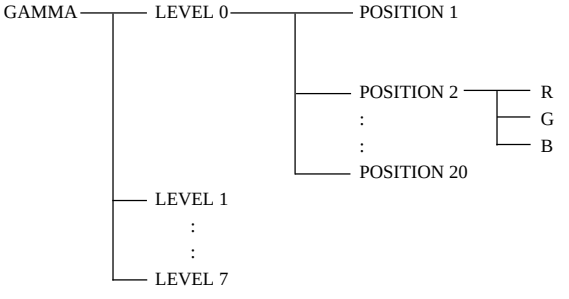
The bottom most menu item on the main menu is the Device Adjustment Menu. Set this menu and select "P. DRV." Perform V COM adjustments for each of the item "V COM/R," "V COM/G," and "V COM/B."
In the above mode, as the built-in test pattern will be output, adjust so that flicker is minimum throughout the whole screen.

4-6-2. Polarization Plate Adjustment

Select "BB-GAMMA" on the device adjustment menu. Press the "PIC MUTING" button and the whole screen will become black. In this state, adjust the respective polarization plate until the black becomes the darkest.

4-6-3. 3D GAMMA Adjustment (Outline)

The principle of 3D GAMMA is described before the adjustment of 3D GAMMA.
3D GAMMA is like a function which can individually adjust W/B at a total of 180 points brightness 8 levels, horizontal direction 6 points, vertical direction 5 points (8*6*5=160 points).
So altogether 540 adjustments (160*3 (RGB)=480) will be required, which is in practice not possible. The following describes a simpler method.
First the "GAMMA" menu consists of the following hierarchy.



When adjusting a certain LEVEL, automatically the internal signal (flat field) of that level will be displayed.

4-6-4. 3D GAMMA Adjustments

1. First input "GAMMA."
2. Set LEVEL to 1.
3. Study the uniformity of the whole screen, and locate the areas where uniformity is poor.
4. Changing "POSITION" to 1, 2, or 3 will display the cursor. The position of the cursor is the position which will be adjusted.
   Move the cursor to the area with poor uniformity.
5. Move "R" and "B" up and down, and adjust so that the uniformity is the same as the other areas.
6. Set LEVEL 2.
7. Like steps 3, 4, and 5, adjust the areas with poor uniformity.
8. Adjust up to LEVEL 6.
9. Study the test pattern from LEVEL 1 to LEVEL 6, and if no problems, return to the first hierarchy, adjust the device, and save the data in SAVE TO MEMORY.

Precautions:

1. Basically adjust RED and BLUE only without changing GREEN.
2. Do not adjust LEVEL 0 and LEVEL 7.
3. To set back factory settings should adjustments fail, skip "SAVE TO MEMORY," press the STANDBY key, and turn off the power. All the adjusted data will be set back to factory settings.
   Factory settings cannot be set back however if "SAVE TO MEMORY" has already been implemented. So check the picture quality carefully prior to implementing "SAVE TO MEMORY."
4. For zoom lens, the uniformity will change slightly according to the zoom position.
   As uniformity will change slightly according to the F number of the lens, perform the adjustments on the projection system under the normal using conditions.
5. Do not change other items in the Device Adjust Menu.
   The device adjust menu contains important parameters for machine operations.
   Unnecessary operations will result in "no image" and "abnormal image."
   "Factory reset" cannot be performed on device adjust menu items.
   (Implementing SAVE TO MEMORY will completely overwrite the data.)
   Do not change data unnecessarily.
6. A floppy disk containing three-dimensional (3D) gamma data is supplied for the optical block (GAMMA) assembly and prism block (GAMMA) assembly.
   Download the data to the unit using dedicated software at first.

4-7. Adjustment Item Initialize Data

Device Name	Item Name	Memory Name							Remark
		SET MEMORY	CHROMA MEMORY						
			NT358/NT443 /BW60	Pal/Pal-M/N /Secam/BW50	15kRGB	YCbCr (15k)	YCbCr (Exc. 15k)	YPbPr	HD -GBR	
RGB MTRX/	CONTRAST	8								Fixed value
	R DRIVE		30	30	30	30	30	30	30	Fixed value
	G DRIVE		30	30	30	30	30	30	30	Fixed value
	B DRIVE		30	30	30	30	30	30	30	Fixed value
	SUB HUE		7	7	7	7	7	7	7	
	SUB BRT	54								Fixed value
	R-Y/R		6	13	13	13	13	13	13	Fixed value
	R-Y/B		12	15	15	15	15	15	15	Fixed value
	G-Y/R		10	8	8	8	8	8	8	Fixed value
	G-Y/B		5	4	4	4	4	4	4	Fixed value
	YUV CON		7	7	11	11	11	11	11	
	YUV COL		12	12	12	12	12	12	12	
	SUB SHP		1	1	3	3	3	3	3	Fixed value
	SHPFO		1	1	1	1	1	1	1	Fixed value
	PRE OVER		0	0	0	0	0	0	0	Fixed value
	DMIC PIC	3								Fixed value
	CTI LVL		2	2	1	1	1	1	1	Fixed value
	LTI LVL		1	1	1	1	0	0	0	Fixed value
D. COM/	VENH	5								Fixed value
CHROMA/	Y-OUT LVL	13								Fixed value
	C-PUT LVL	18								Fixed value
	Y-DL	5								Fixed value
	S B-Y ADJ	7								Fixed value
	S R-Y ADJ	7								Fixed value
	S-INHBT	0								Fixed value
	S-ID	0								Fixed value
	S GP	0								Fixed value
	S V-ID	0								Fixed value
	BELL FO	0								Fixed value
	HPF	0								Fixed value
	SHP GAIN		8	8	8	8	8	8	8	Fixed value
	SHP EQ		0	0	0	0	0	0	0	Fixed value
	SHP FO		2	2	2	2	2	2	2	Fixed value
P. DRV/	VCOM G	40								
	VCOM R	37								
	VCOM B	40								
	SIG CEN	160								Fixed value

Note: There are nonadjustable items in accordance with the input signal.

Device Name	Item Name	Memory Name								Remarks
		SET MEMORY	CHROMA MEMORY							
			NT358/NT443 /BW60	Pal/Pal-M/N /Secam/BW50	15kRGB	YCbCr (15k)	YCbCr (Exc. 15)	YPbPr	HD -GBR	
P. DRV/	SID LVL	206								Fixed value
	PRG LVL	86								Fixed value
	INV CONT	0								Fixed value
SH/	SH1	6								Fixed value
	SH2	200								Fixed value
VAMP	CONT	190								Fixed value
	SUB CON R	170								
	SUB CON G	170								
	SUB CON B	170								
	BRT	215								Fixed value
3D GAMMA/	SUB CONT	0								Fixed value
	SUB BRT	0								Fixed value
	R OSD LVL	16								Fixed value
	G OSD LVL	16								Fixed value
	B OSD LVL	16								Fixed value
	THROUGH	0								Fixed value
	SW	1								Fixed value
	APC THRES	25								Fixed value
	APC LIMIT	32								Fixed value
OTHER/	H START	143								Fixed value
	V START	22								Fixed value
	TEMP LAMP	Nonadjustable								Fixed value
	TEMP PANEL	Nonadjustable								Fixed value
	LAMP FAN1	Nonadjustable								Fixed value
	PANEL FAN1	Nonadjustable								Fixed value
	LAMP FAN2	Nonadjustable								Fixed value
	PANEL FAN2	Nonadjustable								Fixed value
GAMMA		Indication only								

Note: There are nonadjustable items in accordance with the input signal.

Menu Title	Item Name	Memory Name				
		SET MEMORY VIDEO	CH MEMORY			
			S Video	INPUT-A	INPUT-B	
PICTURE CTRL	CONTRAST		80	80	80	80
	BRI GHT		50	50	50	50
	COLOR		50	50	50	–
	HUE		50	50	50	–
	SHARP		50	50	50	–
	RGB ENHANCER		–	–	30	30
	D.PICTURE		OFF	OFF	OFF	–
	GAMMA MODE		–	–	GRAPHICS	GRAPHICS
	COLOR TEMP		LOW	LOW	HIGH	HIGH
	COLOR SYS		AUTO	AUTO	AUTO	AUTO
INPUT SETTING	DOT PHASE					
	SIZE H					
	SHIFT					
	SCAN CONV					
	ASPECT					
	BLANKING					
SET SETTING	STATUS	ON				
	INPUT-A	COMPUTER				
	AUTO INPUT SEL	OFF				
	LANGUAGE	ENGLISH				
	SPEAKER	ON				
	POWER SAVING	OFF				
	SIRCS RECEIVER	FRONT&REAR				
INSTALL SETTING	KEYSTONE MEM.	ON				
	DIGIT KEYSTONE	0				
	INSTALLATION	FLOOR-FRONT				
	LAMP MODE	STANDARD				
	LAMP TIMER	Indication only				
INFORMATION	fH	Indication only				
	fV	Indication only				
	ROM Ver	Indication only				
	OPERATION TIMER	Indication only				
	PREVIOUS LAMP TIMER	Indication only				
W/B ADJUST	GAIN R					
	GAIN G					
	GAIN B					
	BIAS R					
	BIAS G					
	BIAS B					

* : DOT PHASE, SIZE H, SHIFT H/V, SCAN CONV, ASPECT, and BLANKING in the “INPUT SETTING” menu have an initial value respectively in accordance with the input signal (PRESET MEMORY No.).

Note : There are nonadjustable items in accordance with the input signal.

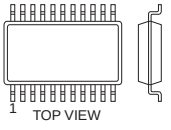
Menu Title	Item Name	Memory Name				
		STATUS	W/B MEMORY			
		MEMORY -HIGH	VIDEO -LOW	VIDEO -HIGH	RGB -LOW	RGB
PICTURE CTRL	CONTRAST					
	BRI GHT					
	COLOR					
	HUE					
	SHARP					
	RGB ENHANCER					
	D.PICTURE					
	GAMMA MODE					
	COLOR TEMP					
	COLOR SYS					
INPUT SETTING	DOT PHASE	24(*)				
	SIZE H	*				
	SHIFT	*				
	SCAN CONV	ON (*)				
	ASPECT	4 :3 (*)				
	BLANKING	0 (*)				
SET SETTING	STATUS					
	INPUT-A					
	AUTO INPUT SEL					
	LANGUAGE					
	SPEAKER					
	POWER SAVING					
	SIRCS RECEIVER					
INSTALL SETTING	KEYSTONE MEM.					
	DIGIT KEYSTONE					
	INSTALLATION					
	LAMP MODE					
	LAMP TIMER					
INFORMATION	FH					
	FV					
	ROM Ver					
	OPERATION TIMER					
	PREVIOUS LAMP TIMER					
W/B ADJUST	GAIN R		170	175	170	175
	GAIN G		170	165	170	165
	GAIN B		170	160	170	160
	BIAS R		80	80	80	80
	BIAS G		80	80	80	80
	BIAS B		80	80	80	80

* : DOT PHASE, SIZE H, SHIFT H/V, SCAN CONV, ASPECT, and BLANKING in the “INPUT SETTING” menu have an initial value respectively in accordance with the input signal (PRESET MEMORY No.).

Note : There are nonadjustable items in accordance with the input signal.

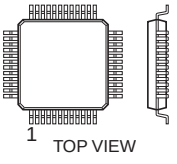
Section 5
Semiconductors

24LC21AT/SN
4LC21ATISN
GS1881-CTA
GS4981CTA
IRMF-AOT-QTP
LM358PS
LM358PSR
M24C64-WMN6T
M24C64-WMN6T(A)
MAX4223ESA-TG068
MC100ELT20DR2
MC33262DR2
NJM082M
SN75157PS-ELL2000
SN75453BPS
SN75453BPSR
ST24FC21M6TR
ST49C101ACF8-05-TR
TC4W53F
TC4W53F(TE12R)
TC7W02F
TC7W02FU(TE12R)
TC7W14F(TE12R)
TC7W14F-TE12L
TC7W14FU(TE12R)
TC7WH04FU(TE12R)
TC7WH74FU(TE12R)
TL082CPS-E20
UPC393G2
UPC393G2-E2



8pin SOP

AD9884AKS-140



28pin QFP

ADV7123KST140
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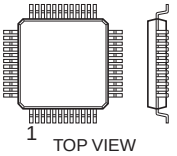
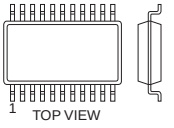
CXD2064Q-T6



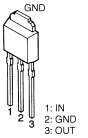
48pin QFP

BA033FP-E2
CXA1875AM-T4
EL4332CS-TE2
MAX202CSE
MAX202CSE-T
MAX797ESE-TE2
MC74HC4538AF
MC74HC4538AFEL
TC74HC4052AFT(EL)
TC74VHC123AF
TC74VHC123AF(EL)
TL431BCDR2
W152-2G-E2

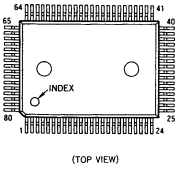


16pin SOP

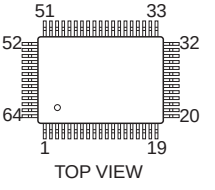
BA09FP-E2
BA12FP-E2



CXA2101AQ-TL



CXA2112R
CXA2112R-T6
CXA3512R-T6



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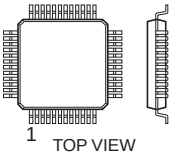
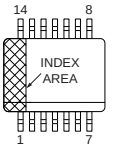


208pin QFP

HA4314BCB-E2



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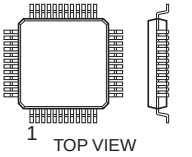
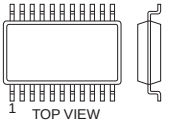


120pin QFP

IDT71V016S15PH-TL



44pin SOP

IMISM530AYB-D REV.T
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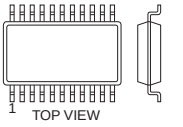
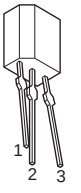
M62399FP-TE2
TC74VHC244F
TC74VHC244F(EL)
TEA2025D-013TR



20pin SOP

LM385M-1.2
LM385MX-1.2



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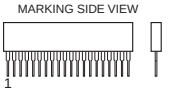

5pin SIP

LP2985IM5X-3.5
SC7S04F
TC75S56F(TE85R)
TC7S04F(TE85R)
TC7S04FU(TE85R)
TC7S14F
TC7S14F(TE85R)
TC7S66FU
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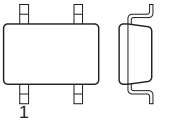
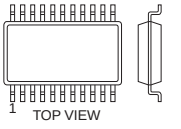
TC7W08FU
TC7W08FU(TE12R)



5pin CHIP

M52749FP-TP



42pin SOP

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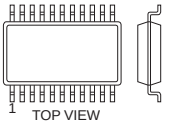
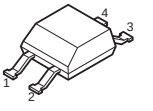
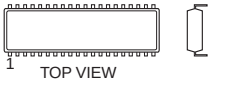


48pin SOP

PC123F2
PC123FY2

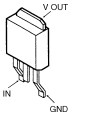


PC74HC123D-T



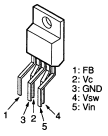
16pin DIP

PQ05SZ1U



IC, Transistor

PQ20VZ1U
PQ20VZ5U



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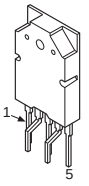

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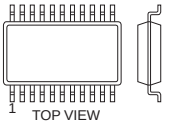
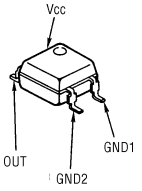
ST72T631K4M1-XX



34pin SOP

RS-140-T



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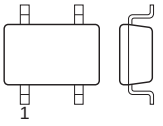
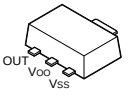
S-80842ANNP-ED6-T2

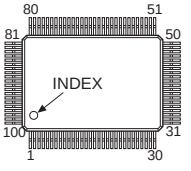


4pin CHIP

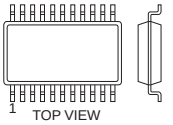
S-80840ANUP-ED4-T2



SII151

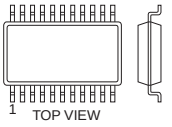


SN74HC02ANS
TC74HC02AF(EL)
TC74LCX04FT(EL)
TC74LCX125FT(EL)
TC74VHC02FT(EL)
TC74VHC14FT(EL)
TC74VHC86FT(EL)
TC74VHCT541AFT(EL)



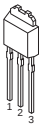
14pin SOP

ST72T631L4M1-102

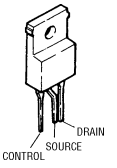


34pin SOP

TA7812F(TE16L)



TOP223Y-BB
TOP224Y-BB



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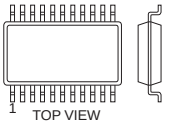
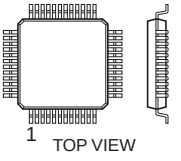


34pin SOP

UPD72012GB-003-3B4



44pin QFP

2SA1162-G
2SA1162-YG-TE85L
2SA1213Y-TE12L
2SA1462-YT1Y43Y44
2SA1462-Y33
2SA1611-M5M6
2SA1611T1-M5M6
2SB798-DL
2SC1623-L5L6
2SC2412K-T-146-R
2SC2712-YG
2SC2712-YG-TE85L
2SC3326N-A
2SC3326N-TE85L-AB
2SC3545-T1T44
2SC3545-T43
DTA144EKA-T146
DTC114EKA
DTC114EKA-T146
DTC144EKA
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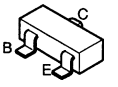

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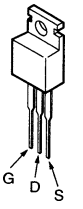
2SA1162-G



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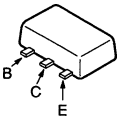
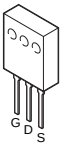
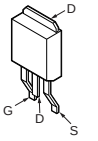
2SD1623-S



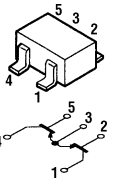
2SK2198



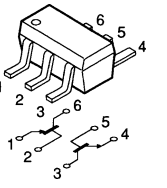
2SK2281-4061



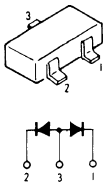
FMS1
FMS1-T-148



HN1BFU-TE85R



1S2836
1S2836-T1
DAP202K
DAP202K-T-146
FMG-G2CS



1SS226
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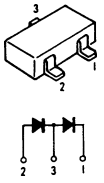
DA204K-T-146
MA157-TX



1SS355TE-17
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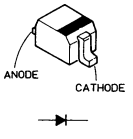
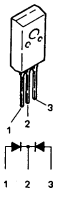
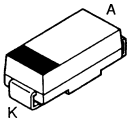
DTZ-TT11-3.3B
MA111
MA111-(K8).S0
MA8039
RB501V-40TE-17
RD27SB-T1
RD3.3SB2-T1
RD4.7SB-T1
RD4.7SB-T2
RD5.6S-B
RD5.6SB-T1
RD6.2S-B
RD6.2SB-T1
RD9.1S-B2
RD9.1SB2-T1
UDZ-TE-17-3.3B
UDZ-TE-17-3.9B
UDZ-TE-17-8.2B



D10SC9M



D1FL20U-TA
D1FL40
D1FS4A-TA
D2FL20
D2FL20U-TA



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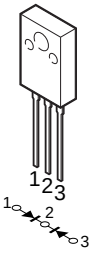

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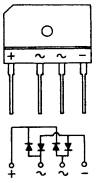
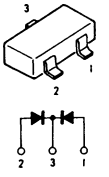
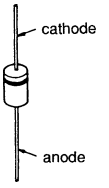


DAN202K
DAN202K-T-146



DTZ-TT11-2.4B
P6KE350A
RM11A
RM11C



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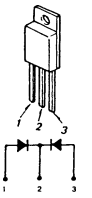

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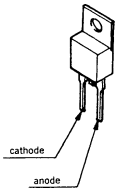
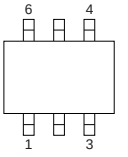


HN1D03FU-TE85L
HN1D03FU-TE85R



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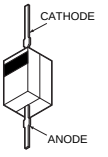
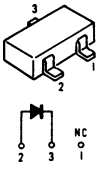
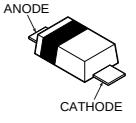
P6KE300AG23
P6KE350AG23



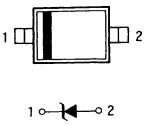
RD12M-B2
RD12M-T1B2



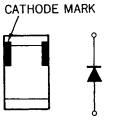
RD2.2M-T1B
UDZ-TE-17-2.2B
UDZ-TE-17-27B



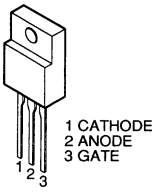
RD5.6SB2-T1



SEC1401C
SEC1801C
SEC1901C
SEC2422C



TF861S



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Section 6
Spare Parts

6-1. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked ⚠ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.
Parts list has the present standardized repair parts.

3. Stock of Parts

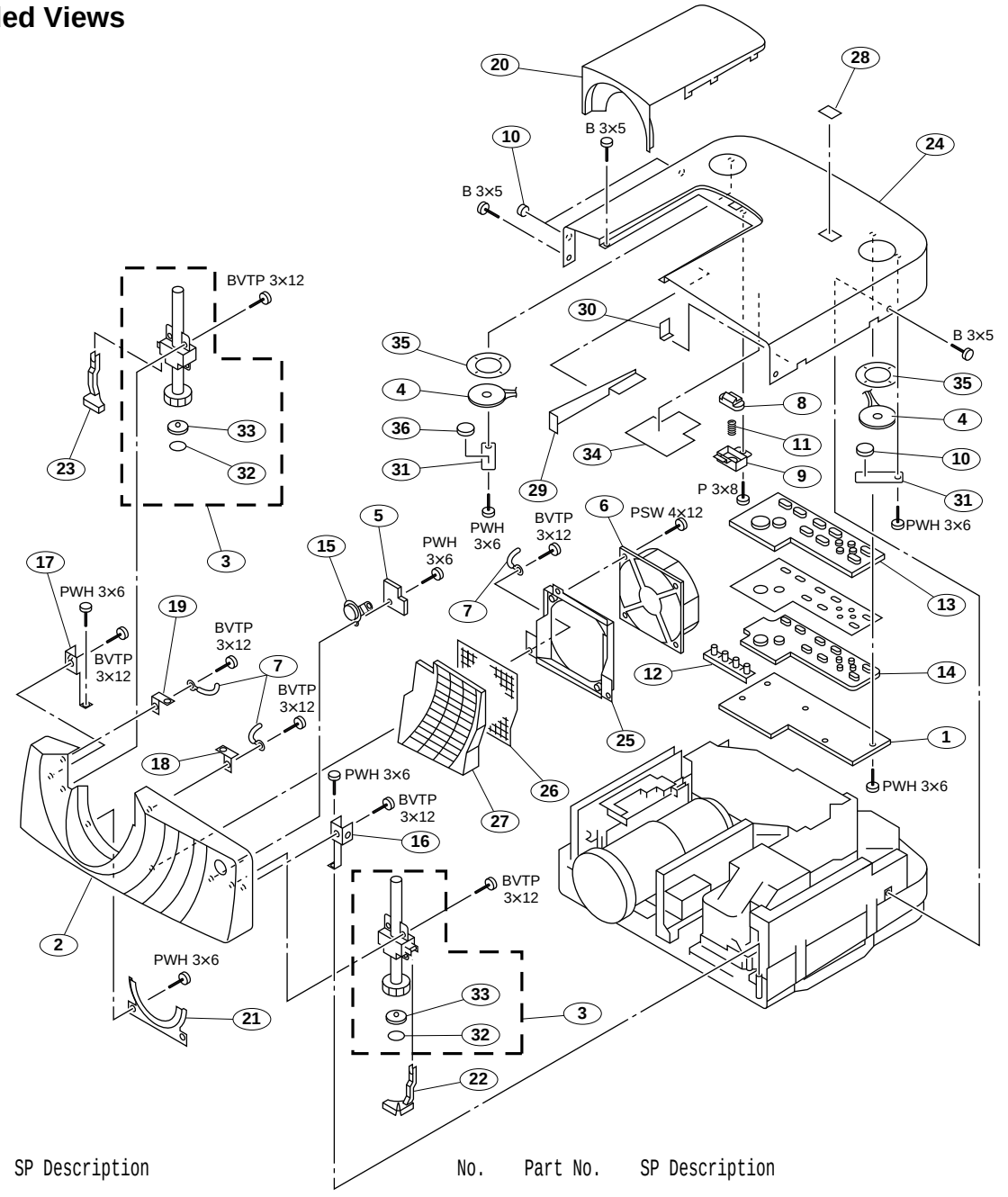
Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

4. Harness

Harnesses with no part number are not registered as spare parts.
In need of repair, get components shown in the list and repair using them.

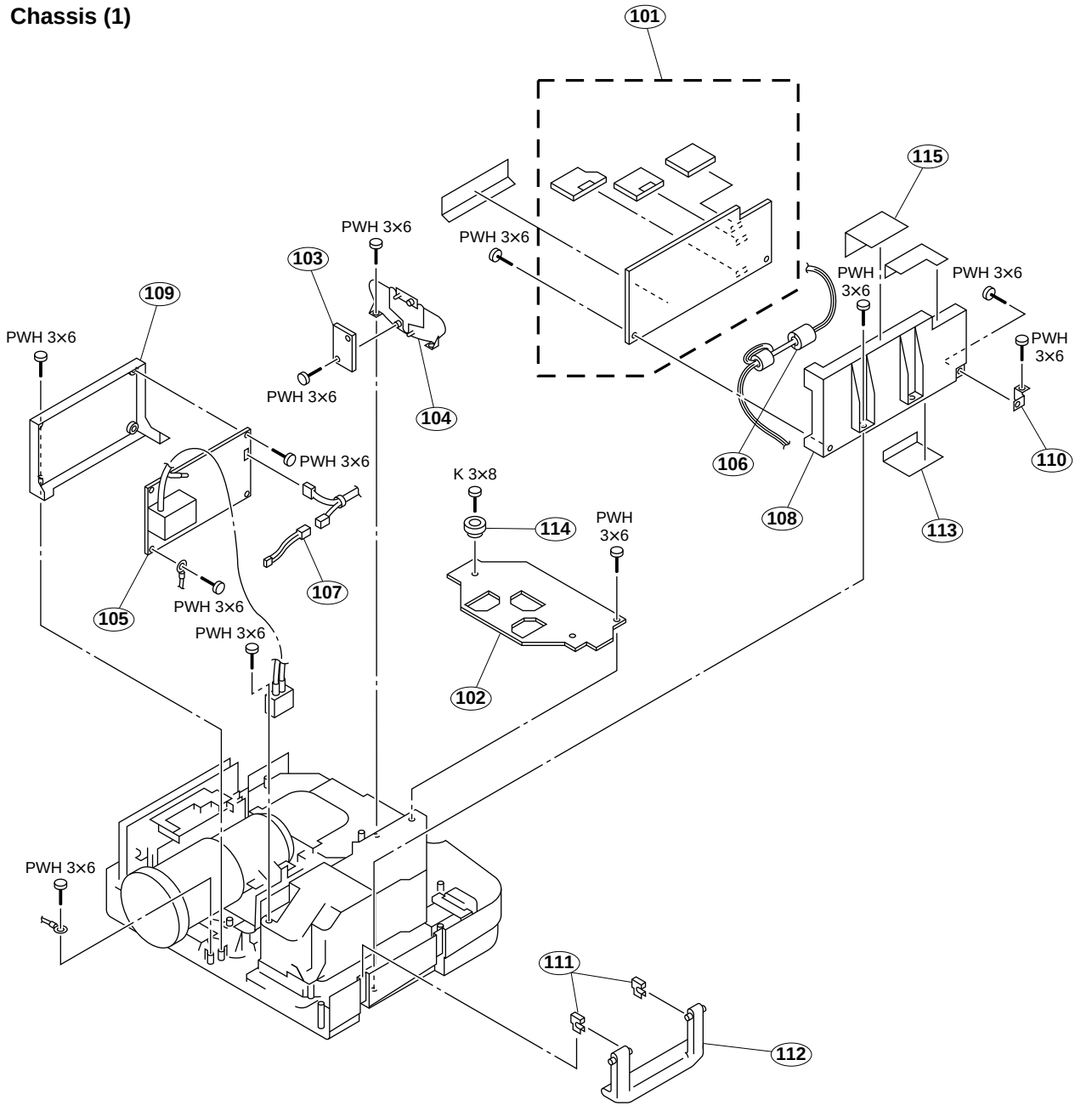
6-2. Exploded Views

1. Cabinet



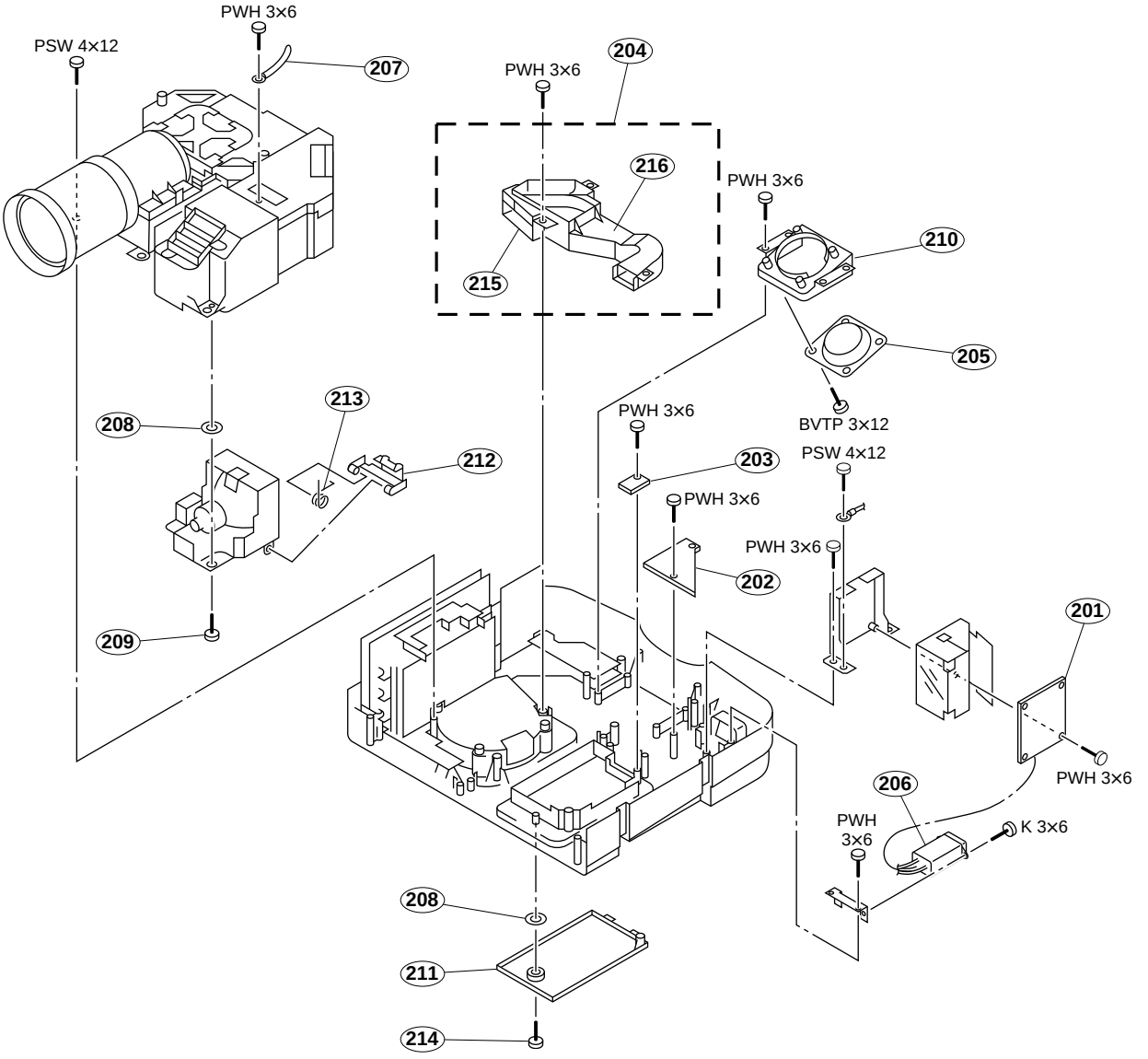
No.	Part No.	SP	Description
1	A-1375-193-A	o	MOUNTED CIRCUIT BOARD, H
2	X-4037-378-3	o	COVER ASSY, FRONT
3	X-4038-528-1	s	ADJUSTER ASSY
4	1-529-499-11	s	SPEAKER (4.5CM)
5	1-675-457-11	o	PRINTED WIRING BOARD, NF
6	1-763-422-11	s	FAN, DC
7	3-701-822-00	s	HOLDER, WIRE
8	4-063-672-01	o	STOPPER (LCT)
9	4-063-673-01	o	HOLDER (LCT)
10	4-063-685-01	o	FOOT
11	4-063-686-01	o	SPRING, COMPRESSION
12	4-073-746-01	o	GUIDE, LED
13	4-073-747-01	s	BUTTON, CONTROL
14	4-073-748-02	o	GUIDE, BUTTON
15	4-073-758-01	o	RM (FR)
16	4-073-759-01	o	HOLDER (FBHR)
17	4-073-760-01	o	HOLDER (FBHL)
18	4-073-762-01	o	HOLDER (FHR)
19	4-073-763-01	o	HOLDER (FHL)
20	4-073-764-02	o	COVER (TP), LENS
21	4-073-765-02	s	COVER (BT), LENS
22	4-073-766-11	o	LEVER (R), ADJUSTER
23	4-073-767-11	o	LEVER (L), ADJUSTER
24	4-073-768-02	o	HOOD
25	4-073-770-01	o	HOLDER, FAN
26	4-073-771-01	o	NET, FAN
27	4-073-772-11	o	DUCT, FAN
28	4-073-773-21	o	EMBLEM (PX30) [VPL-PX31]
	4-073-773-31	o	EMBLEM (PX30) [VPL-PX21]
29	4-073-774-01	o	GUARD (H1), LIGHTING
30	4-073-775-01	o	SPACER (H)
31	4-073-777-01	o	HOLDER (T), SP
32	4-073-783-11	o	SHEET, UR
33	4-073-784-11	o	SHAFT, ADJUSTABLE
34	4-075-438-01	o	SHEET, HEAT
35	4-076-642-01	o	CUSHION (H), SP
36	4-076-643-01	o	CUSHION (S), SP
	7-682-148-09	s	SCREW +P 3X8
	7-682-546-04	s	SCREW +B3X5
	7-682-663-09	s	SCREW +PS 4X12
	7-682-903-11	s	SCREW +PWH 3X6
	7-685-648-79	s	SCREW +BV3X12

2. Chassis (1)



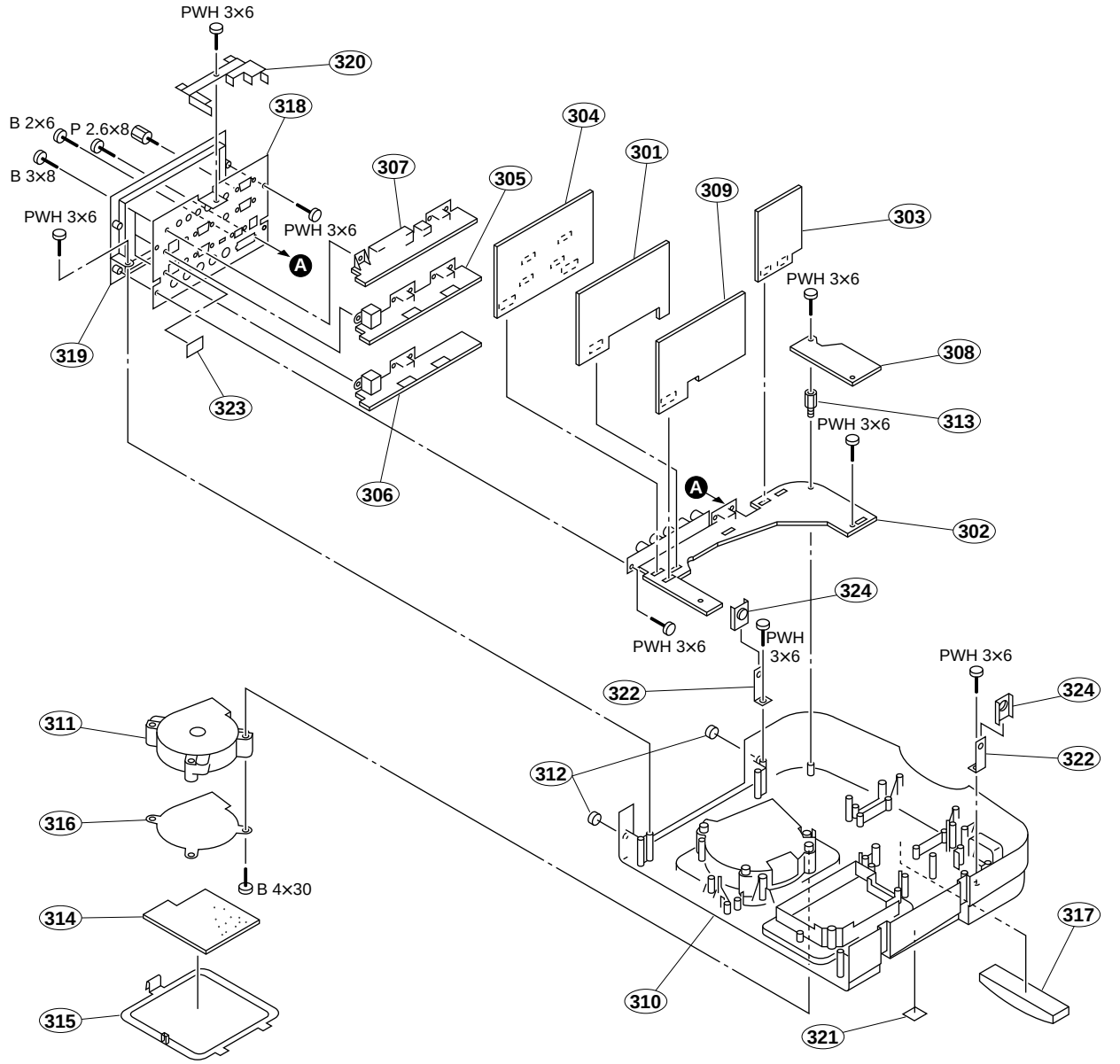
No.	Part No.	SP	Description
101	A-1316-486-D	o	MOUNTED CIRCUIT BOARD, GA
102	A-1335-139-A	o	MOUNTED CIRCUIT BOARD, C
103	A-1390-974-A	o	MOUNTED CIRCUIT BOARD, NR
104	X-4038-527-1	o	RM (ER) ASSY
105	⚠ 1-468-445-31	s	POWER BLOCK
106	1-500-278-11	s	FILTER, CLAMP (FERRITE CORE)
107	1-900-249-68	s	CONNECTOR ASSY, FUSE 2P
108	4-073-730-01	o	HOLDER (G)
109	4-073-731-01	o	HOLDER (L)
110	4-073-735-01	o	PLATE (G), EARTH
111	4-073-752-01	o	BUSH, HANDLE (POM)
112	4-073-753-01	s	HANDLE
113	4-073-990-01	o	SHEET (G2), INSULATOR
114	4-074-968-02	s	SPACER (C) (SUM24L)
115	4-075-163-02	o	PLATE (G)
	7-682-248-09	o	SCREW +K 3X8
	7-682-903-11	s	SCREW +PWH 3X6

3. Chassis (2)



No.	Part No.	SP	Description
201	A-1241-455-A	o	MOUNTED CIRCUIT BOARD, F
202	A-1385-189-A	o	MOUNTED CIRCUIT BOARD, K
203	A-1390-975-A	o	MOUNTED CIRCUIT BOARD, S
204	X-4038-509-1	s	DUCT ASSY
205	1-505-600-11	s	SPEAKER (065W004)
206	1-815-295-11	s	AC INLET 3P
207	3-701-822-00	s	HOLDER, WIRE
208	3-715-526-01	o	WASHER (M3) (PLA)
209	4-066-202-01	s	SCREW, M3
210	4-073-740-01	o	HOLDER (L), SPEAKER
211	4-073-750-01	o	LAMP COVER
212	4-073-787-01	o	DOOR, DUCT
213	4-073-788-01	o	SPRING, DOOR
214	4-073-989-01	s	SCREW (+B M3X12), PREVENTION
215	4-080-081-01	o	DUCT (LAMP)
216	4-080-082-01	o	DUCT (PANEL)
	7-682-247-09	s	SCREW +K 3X6
	7-682-663-09	s	SCREW +PS 4X12
	7-682-903-11	s	SCREW +PWH 3X6
	7-685-648-79	s	SCREW +BV3X12

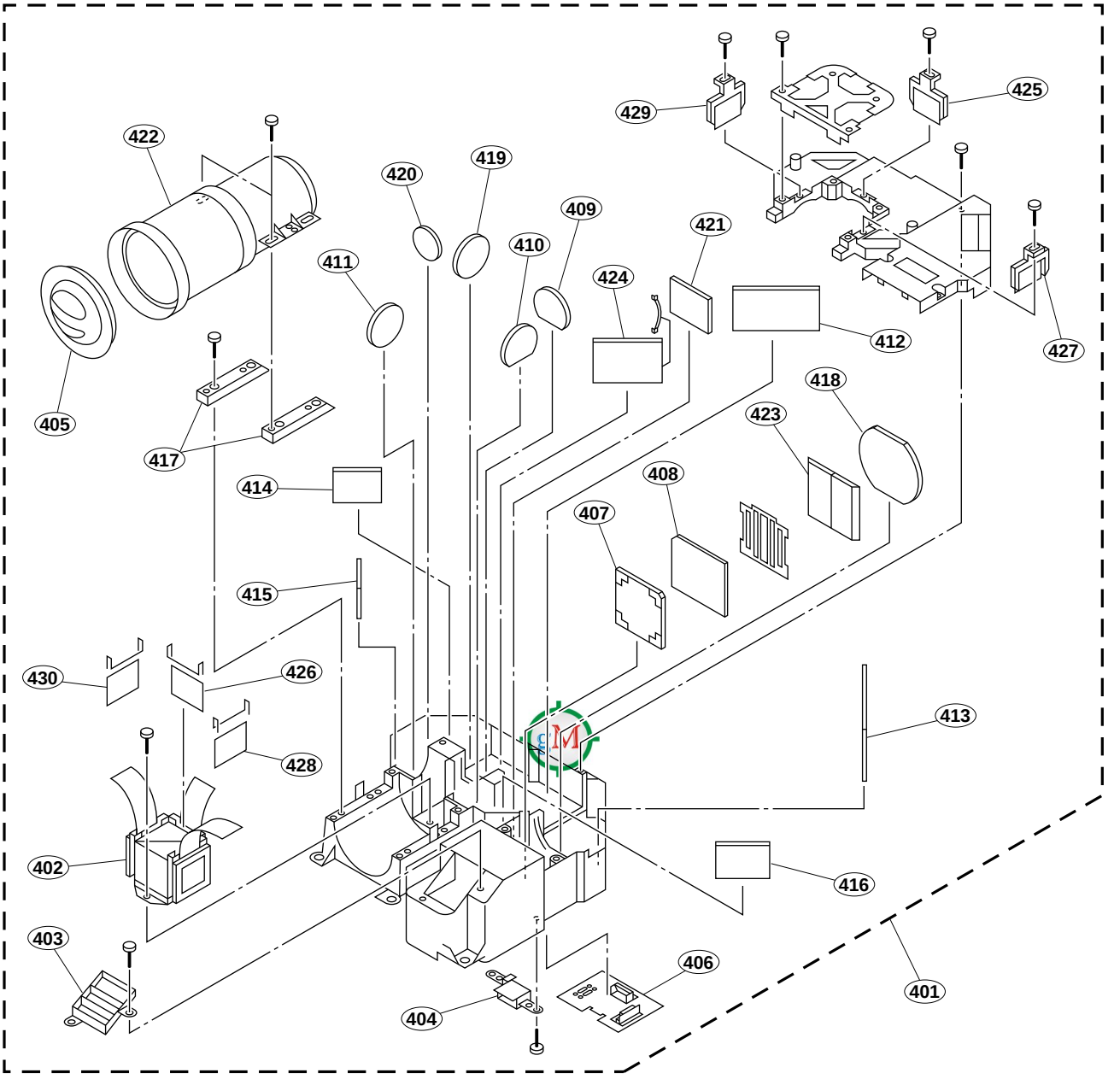
4. Base



No.	Part No.	SP	Description
301	A-1136-038-B	o	MOUNTED CIRCUIT BOARD, BA
302	A-1136-039-A	o	MOUNTED CIRCUIT BOARD, BB
303	A-1136-040-A	o	MOUNTED CIRCUIT BOARD, BC
304	A-1275-178-A	o	MOUNTED CIRCUIT BOARD, QA
305	A-1275-179-A	o	MOUNTED CIRCUIT BOARD, QC
306	A-1275-180-A	o	MOUNTED CIRCUIT BOARD, QB
307	A-1275-181-A	o	MOUNTED CIRCUIT BOARD, QD
308	A-1385-190-A	o	MOUNTED CIRCUIT BOARD, KS
309	A-1395-021-A	o	MOUNTED CIRCUIT BOARD, Y [for VPL-PX31]
	A-1395-022-A	o	MOUNTED CIRCUIT BOARD, Y [for VPL-PX21]
310	X-4037-413-5	o	BASE ASSY
311	1-763-417-11	s	FAN, DC
312	4-063-685-01	o	FOOT
313	4-066-549-11	s	SPACER
314	4-073-737-01	s	FILTER (PUR-FM)(98.5X83)

No.	Part No.	SP	Description
315	4-073-738-01	o	COVER, FILTER
316	4-073-739-01	o	GUARD, FAN
317	4-073-741-01	o	FOOT (RE) (CR70)
318	4-073-744-01	o	PANEL, CONNECTOR
319	4-073-745-02	o	HOLDER, CONNECTOR PANEL
320	4-073-749-02	o	HOLDER, PWB
321	4-073-751-01	o	CUSHION, HANDLE
322	4-073-761-02	o	HOLDER (BH)
323	4-075-283-01	o	GASKET (U)
324	4-075-864-01	o	CAP (BH)
	7-621-259-52	s	SCREW +P 2.6X8
	7-621-772-38	s	SCREW +B2X6
	7-682-548-04	s	SCREW +B3X8
	7-682-568-09	s	SCREW +B4X30
	7-682-903-11	s	SCREW +PWH 3X6

5. Optical Unit



No.	Part No.	SP	Description
401	A-1501-864-A	s	OPTICAL BLOCK (G) ASSY [for VPL-PX21]
	A-1501-869-A	s	OPTICAL BLOCK (G) ASSY [for VPL-PX31]
402	A-1501-865-A	s	PRISM BLOCK (G) ASSY [for VPL-PX21]
	A-1501-870-A	s	PRISM BLOCK (G) ASSY [for VPL-PX31]
403	4-073-776-02	s	GUARD (L), LIGHTING
404	4-073-785-02	s	DUCT (F)
405	4-073-983-01	s	CAP, LENS
406	4-080-083-01	o	PANEL, AIR DUCT
407	9-885-000-53	s	LENS A, FLYEYE
408	9-885-000-54	o	LENS B, FLYEYE
409	9-885-000-56	s	POLARIZER, G/CONDENSER LENS
410	9-885-000-57	s	POLARIZER, B/CONDENSER LENS
411	9-885-000-58	s	POLARIZER, R/CONDENSER LENS
412	9-885-000-59	o	B REFLECTION DICHROIC MIRROR
413	9-885-000-61	o	MIRROR A
414	9-885-000-62	o	MIRROR B
415	9-885-000-63	o	MIRROR C
416	9-885-000-64	o	MIRROR D
417	9-885-000-65	s	SPACER
418	9-885-000-66	o	MAIN CONDENSER LENS
419	9-885-000-67	o	LENS A, RELAY
420	9-885-000-68	o	LENS B, RELAY
421	9-885-000-69	o	UV PROOF GLASS
422	9-885-001-61	s	PROJECTION LENS
423	9-885-010-67	s	FLY EYE/PS CONVERTER LENS
424	9-885-010-68	o	G REFLECTION DICHROIC MIRROR
425	9-885-010-69	s	POLARIZER, G-IN PLATE
426	9-885-010-70	s	POLARIZER, G-OUT PLATE
427	9-885-010-71	s	POLARIZER, B-IN PLATE
428	9-885-010-72	s	POLARIZER, B-OUT PLATE
429	9-885-010-73	s	POLARIZER, R-IN PLATE
430	9-885-010-74	s	POLARIZER, R-OUT PLATE

6-3. Electrical Parts List for Boards

BA BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1136-038-B	o	MOUNTED CIRCUIT BOARD, BA
C101	1-131-998-11	s	CAP, SOLID ELECT 82MF 6.3 V
C102	1-128-065-11	s	CAPACITOR ELECT 68MF/10V(CHIP)
C103	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C104	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C105	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
C106	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C107	1-165-319-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C108	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C109	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C110	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C111	1-163-275-11	s	CAPACITOR CERAMIC 1000PF/50V
C112	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C114	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C115	1-131-998-11	s	CAP, SOLID ELECT 82MF 6.3 V
C116	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C117	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C118	1-127-820-11	s	CAPACITOR, SQUARE CHIP 4.7MF
C119	1-165-319-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C120	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C121	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C122	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C123	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C124	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C125	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C126	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C127	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C128	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C131	1-115-565-11	s	CAPACITOR, CERAMIC 2.2MF B/10V
C133	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C136	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C137	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C138	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C139	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C140	1-125-898-11	s	CAPACITOR, CERAMIC 0.22MF 50V
C141	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C142	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C143	1-163-235-11	s	CAPACITOR,CHIP CERAMIC22PF/50V
C144	1-128-065-11	s	CAPACITOR ELECT 68MF/10V(CHIP)
C145	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C146	1-128-065-11	s	CAPACITOR ELECT 68MF/10V(CHIP)
C147	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C149	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C150	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C151	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C152	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C153	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C154	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C155	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C156	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C157	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C158	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C159	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C160	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C161	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C162	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C163	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C164	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V

(BA BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C165	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C166	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C167	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C168	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C169	1-128-065-11	s	CAPACITOR ELECT 68MF/10V(CHIP)
C170	1-164-161-11	s	CAPACITOR, CERAMIC 2200PF/100V
C171	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C172	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C173	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C174	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C175	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C176	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C177	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C178	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C179	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C180	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C181	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C182	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C183	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C184	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C185	1-109-982-11	s	CAPACITOR,CHIP CERAMIC 1MF/10V
C186	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C187	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C188	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C189	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C190	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C191	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C192	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C193	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C194	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C195	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C196	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C197	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C198	1-128-010-11	s	CAPACITOR,ERECT 0.22MF/50V
C199	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C200	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C201	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C202	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C203	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C204	1-128-013-11	s	CAPACITOR ERECT 1MF/50V
C205	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C206	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C207	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C208	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C209	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C210	1-163-245-11	s	CAPACITOR CERAMIC 56PF/50V
C211	1-163-235-11	s	CAPACITOR,CHIP CERAMIC22PF/50V
C212	1-126-206-11	s	CAPACITOR, ELECT 100MF/6.3V
C213	1-165-319-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C214	1-163-237-11	s	CAPACITOR CERAMIC 27PF/50V
C215	1-163-245-11	s	CAPACITOR CERAMIC 56PF/50V
C216	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C218	1-163-237-11	s	CAPACITOR CERAMIC 27PF/50V
C219	1-163-245-11	s	CAPACITOR CERAMIC 56PF/50V
C220	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C221	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C222	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C223	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C224	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V

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Ref. No. or Q'ty	Part No.	SP	Description
C225	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C226	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C227	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C239	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C240	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C241	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C242	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C243	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C244	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C250	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C251	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C252	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C253	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C254	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C256	1-163-131-00	s	CAPACITOR,CHIP CERAMIC 390PF
C257	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C258	1-135-346-11	s	CAP, SOLID ELECT 39MF 16V
C259	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C260	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C261	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C263	1-128-065-11	s	CAPACITOR ELECT 68MF/10V(CHIP)
C264	1-128-065-11	s	CAPACITOR ELECT 68MF/10V(CHIP)
C265	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C266	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C267	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
CN101	1-793-797-21	o	CONNECTOR, BOARD TO BOARD
CN102	1-580-789-21	o	PIN,CONNECTOR (SMD) 6P
D101	8-719-988-61	s	DIODE 1SS355TE-17
FL100	1-233-736-21	s	FILTER, EMI
FL101	1-233-736-21	s	FILTER, EMI
FL102	1-233-736-21	s	FILTER, EMI
FL106	1-233-736-21	s	FILTER, EMI
FL107	1-233-736-21	s	FILTER, EMI
FL251	1-239-466-21	s	FILTER, EMI
IC101	8-752-094-47	s	IC CXA2123AQ-T6
IC102	8-752-086-33	s	IC CXA2101AQ-TL
IC103	8-759-242-64	s	IC TC4W53F
IC105	8-759-031-84	s	IC SC7S04F
IC106	8-759-031-84	s	IC SC7S04F
IC221	8-752-390-37	s	IC CXD2064Q(T6)
IC250	8-752-072-81	s	IC CXA1875AM
IC251	8-759-242-64	s	IC TC4W53F
IC252	8-759-031-84	s	IC SC7S04F
IC253	8-759-494-88	s	IC TC75S56F(TE85R)
IC254	8-759-084-79	s	IC TC7S14F
IC255	8-759-460-79	s	IC BA09FP-E2
IC256	8-759-344-12	s	IC GS4981CTA
IC257	8-759-038-15	s	IC MC74HC4538AF
IC258	8-759-157-17	s	IC PQ05SZ1U
IC259	8-759-433-92	s	IC TC7W14F-TE12L
L100	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L101	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L102	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L103	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L104	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L105	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH

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Ref. No. or Q'ty	Part No.	SP	Description
L106	1-412-363-11	s	FERRITE, EMI (SMD)
L108	1-412-363-11	s	FERRITE, EMI (SMD)
L109	1-412-363-11	s	FERRITE, EMI (SMD)
L110	1-410-389-31	s	INDUCTOR,CHIP 47UH (3225)
L111	1-410-385-11	s	INDUCTOR,CHIP 22UH (3225)
L112	1-410-383-31	s	INDUCTOR,CHIP 15UH (3225)
L113	1-410-383-31	s	INDUCTOR,CHIP 15UH (3225)
L251	1-409-556-11	s	COIL, CHOKE 47UH
Q101	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q103	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q107	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q108	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q109	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q110	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q111	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q112	8-729-902-96	s	TRANSISTOR FMS1
Q113	8-729-902-96	s	TRANSISTOR FMS1
Q114	8-729-902-96	s	TRANSISTOR FMS1
Q115	8-729-107-31	s	TRANSISTOR 2SC3545
Q116	8-729-107-31	s	TRANSISTOR 2SC3545
Q117	8-729-107-31	s	TRANSISTOR 2SC3545
Q118	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q119	1-801-806-11	s	TRANSISTOR DTC144EAK
Q120	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q121	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q122	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q123	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q124	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q125	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q126	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q127	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q128	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q129	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q130	8-729-216-22	s	TRANSISTOR 2SA1162-G
R101	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R102	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R103	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R104	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R105	1-216-678-11	s	RESISTOR,CHIP 13K 1/10W(2012)
R106	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R107	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R108	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R109	1-216-639-11	s	RESISTOR,CHIP 330 1/10W (2012)
R110	1-216-685-11	s	RESISTOR,CHIP 27K 1/10W(2012)
R111	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R112	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R113	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R114	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R115	1-216-061-00	s	RESISTOR CHIP 3.3K 1/10W(2012)
R116	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R118	1-216-683-11	s	RESISTOR,CHIP 22K 1/10W (2012)
R119	1-208-796-11	s	RESISTOR,CHIP 3.9K 1/10W(2012)
R120	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R121	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R122	1-216-644-11	s	RESISTOR,CHIP 510 1/10W (2012)
R123	1-216-639-11	s	RESISTOR,CHIP 330 1/10W (2012)
R124	1-216-683-11	s	RESISTOR,CHIP 22K 1/10W (2012)
R125	1-216-047-91	s	RESISTOR, CHIP 820 1/10W(2125)

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Ref. No. or Q'ty	Part No.	SP	Description
R126	1-216-061-00	s	RESISTOR CHIP 3.3K 1/10W(2012)
R127	1-216-649-11	s	RESISTOR,CHIP 820 1/10W (2012)
R130	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R131	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R132	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R133	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R134	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R136	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R137	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R138	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R139	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R140	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R141	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R142	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R143	1-216-129-00	s	RESISTOR,CHIP 2.2M 1/10W(2012)
R147	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R148	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R149	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R150	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R151	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R152	1-216-047-91	s	RESISTOR, CHIP 820 1/10W(2125)
R153	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R154	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R155	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R156	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R157	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R158	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R159	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R160	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R161	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R162	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R163	1-216-133-00	s	RESISTOR,CHIP 3.3M 1/10W(2012)
R164	1-216-039-00	s	RESISTOR, CHIP 390 1/10W(2012)
R165	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R166	1-216-039-00	s	RESISTOR, CHIP 390 1/10W(2012)
R167	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R168	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R169	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R170	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R172	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R174	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R176	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R177	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R178	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R179	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R180	1-216-683-11	s	RESISTOR,CHIP 22K 1/10W (2012)
R181	1-216-069-00	s	RESISTOR,CHIP 6.8K 1/10W(2012)
R182	1-216-070-00	s	RESISTOR,CHIP 7.5K 1/10W(2012)
R183	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R184	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R185	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R186	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R187	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R188	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R189	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R190	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R191	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R192	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R193	1-216-691-11	s	RESISTOR,CHIP 47K 1/10W(2012)

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Ref. No. or Q'ty	Part No.	SP	Description
R194	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R195	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R196	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R197	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R198	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R202	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R203	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R204	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R205	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R206	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R207	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R208	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R209	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R210	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R211	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R212	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R213	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R214	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R215	1-216-629-11	s	RESISTOR,CHIP 120 1/10W (2012)
R216	1-216-629-11	s	RESISTOR,CHIP 120 1/10W (2012)
R217	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R224	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R225	1-216-627-11	s	RESISTOR,CHIP 100 1/10W (2012)
R226	1-216-644-11	s	RESISTOR,CHIP 510 1/10W (2012)
R227	1-216-682-11	s	RESISTOR,CHIP 20K 1/10W (2012)
R228	1-216-035-00	s	RESISTOR, CHIP 270 1/10W(2012)
R229	1-216-649-11	s	RESISTOR,CHIP 820 1/10W (2012)
R230	1-216-047-91	s	RESISTOR, CHIP 820 1/10W(2125)
R231	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R232	1-216-682-11	s	RESISTOR,CHIP 20K 1/10W (2012)
R233	1-216-035-00	s	RESISTOR, CHIP 270 1/10W(2012)
R234	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R235	1-216-047-91	s	RESISTOR, CHIP 820 1/10W(2125)
R236	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R238	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R250	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R251	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R252	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R253	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R254	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R255	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R256	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R257	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R258	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R259	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R260	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R261	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R262	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R263	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R264	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R265	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R266	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R267	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R268	1-218-762-11	s	RESISTOR,CHIP 270K 1/10W(2012)
R269	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R270	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R271	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R272	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R273	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)

(BA BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R274	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R275	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R276	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R277	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R278	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R279	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R280	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R281	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R282	1-216-035-00	s	RESISTOR, CHIP 270 1/10W(2012)
R283	1-216-047-91	s	RESISTOR, CHIP 820 1/10W(2125)
R284	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R285	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R288	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R289	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R290	1-216-053-00	s	RESISTOR CHIP 1.5K 1/10W(2012)
R291	1-216-061-00	s	RESISTOR CHIP 3.3K 1/10W(2012)
R292	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R294	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R295	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R296	1-216-043-91	s	RESISTOR, CHIP 560 1/10W(2125)
TP100	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP101	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP102	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP103	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP104	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP105	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP106	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP107	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP108	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP109	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP110	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP111	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP112	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP113	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP114	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP115	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP116	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
X100	1-781-914-21	s	VIBRATOR, CRYSTAL

BB BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1136-039-A	o	MOUNTED CIRCUIT BOARD, BB
C301	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
C302	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C303	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C304	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C305	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C306	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C307	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C308	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C309	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C310	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C311	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C313	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C314	1-119-667-11	s	CAPACITOR CERAMIC 22MF/10V(F)
C316	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
C317	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C318	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C319	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C320	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C321	1-165-176-11	s	CAPACITOR,CERAMIC 47000PF/16V
C322	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C323	1-165-176-11	s	CAPACITOR,CERAMIC 47000PF/16V
C324	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C325	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C326	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C327	1-165-176-11	s	CAPACITOR,CERAMIC 47000PF/16V
C328	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C329	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C330	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C331	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C332	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C333	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C334	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
C335	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C336	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C337	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C338	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C339	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C340	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C341	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C342	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C343	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C344	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C345	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C346	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C347	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C348	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C349	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C350	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C351	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
C352	1-119-667-11	s	CAPACITOR CERAMIC 22MF/10V(F)
C353	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C354	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C355	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C356	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C357	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C358	1-162-920-11	s	CAPACITOR,CERAMIC 27PF/50V CH
C359	1-164-677-11	s	CAPACITOR,CERAMIC 0.033MF/16V

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(BB BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C360	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C361	1-115-416-11	s	CAPACITOR,CERAMIC 1000PF/25V
C362	1-162-920-11	s	CAPACITOR,CERAMIC 27PF/50V CH
C363	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C365	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C366	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C367	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C368	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C369	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C370	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C371	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C372	1-128-391-11	s	CAPACITOR,ELECT 330MF/6.3V
C373	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C374	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C375	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C376	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C377	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C378	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C379	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C380	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C381	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C382	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C383	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C384	1-119-667-11	s	CAPACITOR CERAMIC 22MF/10V(F)
C385	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C386	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C387	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C388	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C389	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C391	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C392	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C393	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C394	1-119-667-11	s	CAPACITOR CERAMIC 22MF/10V(F)
C395	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C396	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C397	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C399	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C400	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C401	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C402	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C403	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C404	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C405	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C406	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
C408	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C409	1-165-176-11	s	CAPACITOR,CERAMIC 47000PF/16V
C412	1-125-837-11	s	CAPACITOR,CHIP CERAMIC1MF/6.3V
C413	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C421	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
C422	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C423	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
CN300	1-778-465-11	s	SOCKET, CONNECTOR 20P
CN301	1-785-306-21	o	CONNECTOR, BOARD TO BOARD
CN303	1-785-306-21	o	CONNECTOR, BOARD TO BOARD
CN304	1-694-649-11	s	TERMINAL BOARD ASSY, INPUT/OUT
CN305	1-785-306-21	o	CONNECTOR, BOARD TO BOARD
CN306	1-793-798-21	o	CONNECTOR, BOARD TO BOARD
CN307	1-785-306-21	o	CONNECTOR, BOARD TO BOARD

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Ref. No. or Q'ty	Part No.	SP	Description
CN308	1-764-007-11	o	PIN, CONNECTOR (SMD) 12P
CN309	1-793-798-21	o	CONNECTOR, BOARD TO BOARD
CN310	1-695-223-21	o	PIN,CONNECTOR (SMD) 10P
CN311	1-793-798-21	o	CONNECTOR, BOARD TO BOARD
CN312	1-764-177-11	o	PIN,CONNECTOR (7P)(SMD)(1.5MM)
D300	8-719-024-77	s	DIODE HN1D03FU-TE85L
D301	8-719-024-77	s	DIODE HN1D03FU-TE85L
D302	8-719-024-77	s	DIODE HN1D03FU-TE85L
D303	8-719-024-77	s	DIODE HN1D03FU-TE85L
D314	8-719-024-77	s	DIODE HN1D03FU-TE85L
D315	8-719-024-77	s	DIODE HN1D03FU-TE85L
D316	8-719-073-01	s	DIODE MA111-(K8).S0
D317	8-719-073-01	s	DIODE MA111-(K8).S0
D318	8-719-977-95	s	DIODE DTZ2.4B-TT11 (5MA)
FB300	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB301	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB302	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB304	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB307	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB308	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB311	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB313	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB314	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB315	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB316	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB317	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB318	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB319	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB320	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB321	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB322	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB323	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FL302	1-239-899-21	s	FILTER, CHIP EMI
IC300	8-759-645-78	s	IC SII151
IC301	8-759-523-96	s	IC TC74VHC86FT (EL)
IC302	8-759-475-43	s	IC TC74LCX125FT(EL)
IC304	8-759-645-12	s	IC AD9884AKS-140
IC305	8-759-531-92	s	IC TC7WH04FU(TE12R)
IC306	8-759-544-01	s	IC S-80828ANNP-EDR-T2
IC307	8-759-475-43	s	IC TC74LCX125FT(EL)
IC308	8-759-646-15	s	IC ST49C101ACF8-05-TR
IC309	8-759-647-53	s	IC IMISM530AYB-D REV.T
IC311	8-759-460-72	s	IC BA033FP
IC312	8-759-582-37	s	IC PQ2TZ15U
IC313	8-759-598-12	s	IC LP2985IM5X-3.5
IC314	8-759-655-74	o	IC MBM29LV400TC-90PFTN-SX1696
IC315	8-759-645-48	s	IC IDT71V016S15PH-TL
IC316	8-759-661-55	s	IC ST24FC21M6TR
IC317	8-759-594-71	s	IC TC7SH14FU-TE85R
IC318	8-759-523-79	s	IC TC74VHC02FT
L300	1-410-992-11	s	CHIP INDUCTOR 0.82UH (2012)
L301	1-409-529-41	s	COIL, CHOKE 10UH
L303	1-410-989-11	s	CHIP INDUCTOR 0.47UH (2012)
Q302	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q303	8-729-230-49	s	TRANSISTOR 2SC2712-YG
R300	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)

(BB BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R301	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R302	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R303	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R304	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R305	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R306	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R307	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R309	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R310	1-216-801-11	s	RESISTOR,CHIP 22 1/16W (1608)
R311	1-216-817-11	s	RESISTOR,CHIP 470 1/16W 1608
R313	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R314	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R320	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R322	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R323	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R325	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R327	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R328	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R329	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R330	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R331	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R332	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R333	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R334	1-216-801-11	s	RESISTOR,CHIP 22 1/16W (1608)
R335	1-216-801-11	s	RESISTOR,CHIP 22 1/16W (1608)
R338	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R339	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R340	1-218-696-11	s	RESISTOR,CHIP 1.5K 1/16W(1608)
R341	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R342	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R343	1-216-801-11	s	RESISTOR,CHIP 22 1/16W (1608)
R344	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R346	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R347	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R348	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R349	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R350	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R353	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R354	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R355	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R356	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R357	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R358	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R359	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R360	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R362	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R371	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R372	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R373	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R387	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R392	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R393	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R394	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R395	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R396	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R397	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R398	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R399	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R411	1-216-837-11	s	RESISTOR,CHIP 22K 1/16W 1608

(BB BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R412	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R413	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R414	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R421	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R423	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R424	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R425	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R426	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R427	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R428	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R429	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R430	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R433	1-216-801-11	s	RESISTOR,CHIP 22 1/16W (1608)
R434	1-216-801-11	s	RESISTOR,CHIP 22 1/16W (1608)
R435	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R436	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R438	1-216-801-11	s	RESISTOR,CHIP 22 1/16W (1608)
R439	1-216-801-11	s	RESISTOR,CHIP 22 1/16W (1608)
R441	1-216-851-11	s	RESISTOR,CHIP 330K 1/16W 1608
R442	1-216-845-11	s	RESISTOR,CHIP 100K 1/16W(1608)
R443	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R445	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R446	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R450	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R451	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R452	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R454	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
RB301	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB324	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB325	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB326	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB327	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB328	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB329	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB330	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB331	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB332	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB333	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB334	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB335	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
S300	1-570-245-11	s	SWITCH,MICRO
TP303	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP321	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP322	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP323	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP324	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP325	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP326	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
X300	1-781-774-11	s	VIBRATOR, CRYSTAL
X301	1-781-665-11	s	VIBRATOR, CRYSTAL

BC BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1136-040-A	o	MOUNTED CIRCUIT BOARD, BC
C500	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C501	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C505	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C506	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C507	1-107-823-11	s	CAPACITOR,CERAMIC 0.47MF/16V
C510	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C511	1-162-927-11	s	CAPACITOR,CERAMIC 100PF/50V CH
C514	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C515	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C516	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C517	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C518	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C519	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C521	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C522	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C523	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C524	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C525	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C526	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C528	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C529	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C533	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C534	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C535	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C536	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C537	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C545	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C546	1-125-837-11	s	CAPACITOR,CHIP CERAMIC1MF/6.3V
C548	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
CN500	1-793-797-21	o	CONNECTOR, BOARD TO BOARD
CN501	1-785-305-21	o	CONNECTOR, BOARD TO BOARD
CN502	1-793-797-21	o	CONNECTOR, BOARD TO BOARD
D500	8-719-985-01	s	IC LM385M-1.2
D501	8-719-073-01	s	DIODE MA111-(K8).S0
FB500	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB501	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB502	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB504	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB505	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FL501	1-234-011-11	s	FILTER, EMI
FL502	1-234-011-11	s	FILTER, EMI
FL503	1-234-011-11	s	FILTER, EMI
FL507	1-239-899-21	s	FILTER, CHIP EMI
IC500	8-759-475-35	s	IC TC74LCX04FT(EL)
IC501	8-759-649-90	s	IC W152-2G-E2
IC502	8-759-592-38	s	IC CXD9512Q
IC503	8-759-684-72	o	IC M24C64-WMN6T(A)
IC505	8-759-475-43	s	IC TC74LCX125FT(EL)
IC506	8-759-645-13	s	IC ADV7123KST140
IC511	8-759-544-01	s	IC S-80828ANNP-EDR-T2
Q500	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q501	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
R500	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R501	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R503	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608

(BC BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R504	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R505	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R506	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R507	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R508	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R509	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R510	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R511	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R512	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R513	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R514	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R517	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R518	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R519	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R520	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R521	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R526	1-216-831-11	s	RESISTOR,CHIP 6.8K 1/16W(1608)
R527	1-216-831-11	s	RESISTOR,CHIP 6.8K 1/16W(1608)
R528	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R529	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R530	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R531	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R534	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R537	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R540	1-216-817-11	s	RESISTOR,CHIP 470 1/16W 1608
R541	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R542	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R543	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R548	1-216-827-11	s	RESISTOR, CHIP 3.3K 1/16W 1608
R560	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R561	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R562	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R563	1-216-831-11	s	RESISTOR,CHIP 6.8K 1/16W(1608)
R565	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R568	1-216-831-11	s	RESISTOR,CHIP 6.8K 1/16W(1608)
R569	1-216-831-11	s	RESISTOR,CHIP 6.8K 1/16W(1608)
RB501	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB502	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB503	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB504	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB505	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB506	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
RB507	1-239-409-11	s	RESISTOR NETWORK 47 (1608)
S500	1-571-674-11	s	SWITCH,SLIDE (2-2-2)
TP501	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP502	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP503	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP504	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP505	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP506	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)

C BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1335-139-A	o	MOUNTED CIRCUIT BOARD, C
C600	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C601	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C602	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C605	1-126-602-11	s	CAPACITOR,ELECT 3.3MF/50V(CHIP
C608	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C609	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C610	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C611	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C612	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C613	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C615	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C616	1-126-602-11	s	CAPACITOR,ELECT 3.3MF/50V(CHIP
C617	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C618	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C619	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C620	1-124-779-00	s	CAPACITOR,ELECT 10MF/16V
C621	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C622	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C624	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C625	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C626	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C627	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C628	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C629	1-126-602-11	s	CAPACITOR,ELECT 3.3MF/50V(CHIP
C630	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C631	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C632	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C633	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C635	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C636	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C637	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C639	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C640	1-162-945-11	s	CAPACITOR,CERAMIC 22PF/50V SL
C641	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C642	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C643	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C644	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C645	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C646	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C649	1-128-400-11	s	CAPACITOR, ELECT 47MF/25V
C650	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C651	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C652	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C654	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C655	1-162-964-11	s	CAPACITOR,CERAMIC 1000PF/50V B
C656	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C657	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C658	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C659	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C660	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C662	1-162-964-11	s	CAPACITOR,CERAMIC 1000PF/50V B
C663	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C664	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C665	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C666	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C667	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C668	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V

(C BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C669	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C670	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C671	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C672	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C673	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C674	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C675	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C677	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C679	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C680	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C681	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C682	1-162-945-11	s	CAPACITOR,CERAMIC 22PF/50V SL
C683	1-162-945-11	s	CAPACITOR,CERAMIC 22PF/50V SL
C684	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C685	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C686	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C687	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C688	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C689	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C690	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C691	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C692	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C693	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C695	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C696	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C698	1-162-964-11	s	CAPACITOR,CERAMIC 1000PF/50V B
C699	1-162-964-11	s	CAPACITOR,CERAMIC 1000PF/50V B
C700	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C701	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C702	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C703	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C704	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C705	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C706	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C707	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C708	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C709	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C710	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C711	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C714	1-162-964-11	s	CAPACITOR,CERAMIC 1000PF/50V B
C715	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C716	1-162-964-11	s	CAPACITOR,CERAMIC 1000PF/50V B
C717	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C718	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C719	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C720	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C722	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C723	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C725	1-162-970-11	s	CAPACITOR CERAMIC 0.01MF/25V B
C726	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C727	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C728	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C729	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C730	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C731	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C732	1-162-910-11	s	CAPACITOR,CERAMIC 5PF/50V 1608
C733	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
CN600	1-774-932-21	s	CONNECTOR, FFC/FPC

(C BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
CN601	1-774-932-21	s	CONNECTOR, FFC/FPC
CN602	1-774-932-21	s	CONNECTOR, FFC/FPC
CN603	1-691-591-11	o	PIN,CONNECTOR (8P)(SMD)(1.5MM)
CN604	1-785-306-21	o	CONNECTOR, BOARD TO BOARD
D600	8-719-159-06	s	DIODE RD4.7SB-T2
D601	8-719-977-95	s	DIODE DTZ2.4B-TT11 (5MA)
FB600	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB601	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB602	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB603	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB605	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB606	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB607	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB608	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB610	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB611	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB612	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB613	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB615	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB616	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB617	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB618	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB619	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB620	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB623	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB624	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB625	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB626	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB627	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB628	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB629	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB630	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB633	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB634	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB635	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB636	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB637	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB638	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB639	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB640	1-414-921-11	s	INDUCTOR, FERRITE BEAD
FB643	1-414-921-11	s	INDUCTOR, FERRITE BEAD
IC600	8-759-351-63	s	IC TA7812F(TE16L)
IC601	8-759-584-86	s	IC M52749FP-TP
IC602	8-759-482-47	s	IC M62399FP (TE2)
IC603	8-752-093-18	s	IC CXA3512R-T6
IC604	8-752-093-18	s	IC CXA3512R-T6
IC605	8-752-093-18	s	IC CXA3512R-T6
IC606	8-752-093-18	s	IC CXA3512R-T6
IC607	8-752-093-18	s	IC CXA3512R-T6
IC608	8-752-093-18	s	IC CXA3512R-T6
IC609	8-759-447-77	s	IC TC7WH74FU (TR12R)
IC610	8-759-490-41	s	IC TC74VHCT541AFT(EL)
IC611	8-759-259-77	s	IC PQ20VZ5U
IC612	8-759-523-84	s	IC TC74VHC14FT (EL)
IC613	8-759-157-17	s	IC PQ05SZ1U
IC615	8-759-157-17	s	IC PQ05SZ1U
IC616	8-759-490-41	s	IC TC74VHCT541AFT(EL)
IC617	8-759-449-58	s	IC LM7131BCM5X

(C BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
L600	1-410-381-11	s	INDUCTOR,CHIP 10UH (3225)
L601	1-410-393-11	s	INDUCTOR,CHIP 100UH (3225)
L602	1-410-369-11	s	INDUCTOR,CHIP 1UH (3225)
L603	1-410-369-11	s	INDUCTOR,CHIP 1UH (3225)
L604	1-410-369-11	s	INDUCTOR,CHIP 1UH (3225)
L605	1-410-369-11	s	INDUCTOR,CHIP 1UH (3225)
L606	1-410-369-11	s	INDUCTOR,CHIP 1UH (3225)
L607	1-410-369-11	s	INDUCTOR,CHIP 1UH (3225)
L608	1-409-556-11	s	COIL, CHOKE 47UH
L609	1-409-556-11	s	COIL, CHOKE 47UH
Q600	8-729-112-65	s	TRANSISTOR 2SA1462
Q601	8-729-112-65	s	TRANSISTOR 2SA1462
Q602	8-729-013-28	s	TRANSISTOR HN1B01FU-TE85R
Q603	8-729-013-28	s	TRANSISTOR HN1B01FU-TE85R
Q604	8-729-112-65	s	TRANSISTOR 2SA1462
Q605	8-729-112-65	s	TRANSISTOR 2SA1462
Q606	8-729-013-28	s	TRANSISTOR HN1B01FU-TE85R
Q607	8-729-013-28	s	TRANSISTOR HN1B01FU-TE85R
Q608	8-729-013-28	s	TRANSISTOR HN1B01FU-TE85R
Q609	8-729-013-28	s	TRANSISTOR HN1B01FU-TE85R
R601	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)
R602	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R605	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R606	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R607	1-220-373-11	s	RESISTOR, CHIP 620 1/16W 1608
R609	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R610	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R611	1-216-816-11	s	RESISTOR,CHIP 390 1/16W (1608)
R612	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R614	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R615	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R617	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R618	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R619	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R620	1-220-373-11	s	RESISTOR, CHIP 620 1/16W 1608
R621	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R622	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R623	1-216-789-11	s	RESISTOR,CHIP 2.2 1/16W(1608)
R624	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R625	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R626	1-216-816-11	s	RESISTOR,CHIP 390 1/16W (1608)
R627	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R629	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R630	1-216-789-11	s	RESISTOR,CHIP 2.2 1/16W(1608)
R631	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R632	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R634	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R636	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R637	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R638	1-220-373-11	s	RESISTOR, CHIP 620 1/16W 1608
R639	1-216-816-11	s	RESISTOR,CHIP 390 1/16W (1608)
R641	1-218-285-11	s	RESISTOR,CHIP 75 1/16W (1608)
R642	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R643	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R644	1-216-841-11	s	RESISTOR, CHIP 47K 1/16W 1608
R645	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R647	1-216-822-11	s	RESISTOR, CHIP 1.2K 1/16W 1608
R648	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R649	1-216-821-11	s	RESISTOR,CHIP 1.0K 1/16W(1608)

(C BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R651	1-220-158-11	s	RES, CHIP 3.6K (1608)
R652	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R653	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R654	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R655	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R656	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R657	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R659	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R660	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R661	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R663	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R666	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R667	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R671	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R672	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R675	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R676	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R677	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R678	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R679	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R684	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R685	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R686	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R687	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R693	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R694	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R695	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R696	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R697	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R698	1-216-789-11	s	RESISTOR,CHIP 2.2 1/16W(1608)
R699	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R700	1-216-789-11	s	RESISTOR,CHIP 2.2 1/16W(1608)
R701	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R702	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R703	1-216-789-11	s	RESISTOR,CHIP 2.2 1/16W(1608)
R704	1-216-825-11	s	RESISTOR,CHIP 2.2K 1/16W 1608
R705	1-216-789-11	s	RESISTOR,CHIP 2.2 1/16W(1608)
R706	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R707	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R708	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R709	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R710	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R712	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R714	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R715	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R716	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R717	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R718	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R719	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R722	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R723	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R724	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R725	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R726	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R727	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R728	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R729	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R730	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)

(C BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R732	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R734	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R738	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R739	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R742	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R743	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R749	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R750	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R752	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R753	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R754	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R755	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R756	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R757	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R762	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R763	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R764	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R765	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R766	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R767	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R768	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R773	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R779	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R781	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R783	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R784	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R785	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R788	1-216-673-11	s	RESISTOR,CHIP 8.2K 1/10W(2012)
R789	1-216-682-11	s	RESISTOR,CHIP 20K 1/10W (2012)
R790	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608)
R791	1-216-644-11	s	RESISTOR,CHIP 510 1/10W (2012)
R792	1-216-829-11	s	RESISTOR,CHIP 4.7K 1/16W(1608)
R794	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R800	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R804	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R805	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R806	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R807	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R808	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R809	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R810	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R811	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R812	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R813	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R814	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R815	1-216-814-11	s	RESISTOR,CHIP 270 1/16W 1608
R816	1-216-805-11	s	RESISTOR,CHIP 47 1/16W 1608
R817	1-216-817-11	s	RESISTOR,CHIP 470 1/16W 1608
R818	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R819	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R820	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R821	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R822	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R823	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R824	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R825	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R826	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
TH600	1-808-656-11	s	THERMISTOR

(C BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
TP600	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP601	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP602	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP603	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP604	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP605	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP606	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP607	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP608	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP609	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP610	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP611	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP612	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP613	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP614	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP615	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP616	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP617	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP618	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP619	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP620	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP621	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)

F BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1241-455-A	o	MOUNTED CIRCUIT BOARD, F
2pcs	1-533-223-11	s	CLIP,FUSE
1pc	4-374-846-01	o	COVER,CAPACITOR,CAP TYPE
C2002	⚠ 1-107-533-11	s	CAPACITOR FILM 1MF/250VAC
C2003	⚠ 1-115-166-11	s	CAPACITOR,FILM 0.22MF/250VAC
CN2000	⚠ 1-815-295-11	s	INLET, AC 3P
CN2002	1-900-249-67	o	CONNECTOR ASSY, RELAY (F) 3P
F2000	⚠ 1-576-233-11	s	FUSE (H.B.C.) 6.3A/250V
L2000	⚠ 1-419-988-11	s	COIL, CHOKE
R2000	⚠ 1-202-847-00	s	RESISTOR,SOLID 560K 1/2W
VD2000	⚠ 1-801-073-41	s	VARISTOR ERZV14D471

GA BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1316-486-D	o	MOUNTED CIRCUIT BOARD, GA

The GA board includes the GB, GC and GD board.

1pc	1-900-256-06	o	CONNECTOR ASSY, RELAY (GA) 3P
1pc	1-900-258-11	o	CONNECTOR ASSY, VH 3P
1pc	4-034-094-01	s	SHEET, INSULATE (PLA)
5pcs	7-682-648-09	s	SCREW +PS 3X8
C2100	1-137-477-11	s	CAPCITOR,FILM 0.47MF/400V
C2101	1-164-346-11	s	CAPACITOR CHIP CERAMIC 1MF/16V
C2102	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2103	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2104	1-115-340-11	s	CAPACITOR CERAMIC 0.22MF/25V B
C2105	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2106	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C2107	1-101-821-00	s	CAPACITOR,CERAMIC 0.002MF/500V
C2110	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2112	1-117-751-11	s	CAPACITOR, ELECT 220MF/450V
C2113	1-117-751-11	s	CAPACITOR, ELECT 220MF/450V
C2114	1-109-892-11	s	CAPACITOR ERECT 47MF/25V(105C)
C2115	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2116	1-107-888-11	s	CAPACITOR, ELECT 47MF/25V(105)
C2117	1-107-889-11	s	CAPACITOR, ELECT 220MF/25V
C2119	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2121	1-130-202-00	s	CAPACITOR FILM 0.022MF/400V PP
C2122	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2124	1-164-506-11	s	CAPACITOR,CERAMIC 4.7MF/16V
C2125	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2126	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2127	1-115-805-11	s	CAPACITOR,ELECT.180MF/35V(105)
C2128	1-115-798-11	s	CAPACITOR, ELECT 3900MF/25V
C2129	1-115-785-11	s	CAPACITOR,ELECT 470MF/25V(105C
C2131	1-115-818-11	s	CAPASITOR,ELECT 1800MF/35V 105
C2132	1-115-818-11	s	CAPASITOR,ELECT 1800MF/35V 105
C2135	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2141	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C2165	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2170	1-115-730-11	s	CAPACITOR ELECT 180MF/10V 105C
C2171	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2172	1-117-228-11	s	CAPACITOR,FILM 2.2MF/450V
C2173	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C2174	1-107-910-11	s	CAPACITOR,ELECT 100MF/50V
C2175	1-164-506-11	s	CAPACITOR,CERAMIC 4.7MF/16V
C2176	1-115-810-11	s	CAPACITOR,ELECT 390MF/35V 105C
CN2101	1-774-248-11	o	CONNECTOR, BOARD TO BOARD
CN2102	1-774-248-11	o	CONNECTOR, BOARD TO BOARD
CN2103	1-564-508-11	o	PLUG,CONNECTOR (5P)
CN2104	1-564-511-11	o	PLUG,CONNECTOR (8P)
CN2105	1-564-507-11	o	PLUG,CONNECTOR (4P)
CN2106	1-774-248-11	o	CONNECTOR, BOARD TO BOARD
D2100	⚠ 8-719-066-75	s	DIODE D6SB80
D2102	8-719-066-76	s	DIODE TF861S
D2103	8-719-055-30	s	DIODE D1FS4A-TA
D2105	8-719-056-97	s	DIODE UDZ-TE-17-27B
D2106	8-719-304-63	s	DIODE RM11C (RECTI)
D2107	8-719-056-97	s	DIODE UDZ-TE-17-27B
D2108	8-719-060-06	s	DIODE FSF10A60
D2110	8-719-073-01	s	DIODE MA111-(K8).S0
D2111	8-719-104-34	s	DIODE 1S2836
D2112	8-719-056-85	s	DIODE UDZ-TE-17-8.2B

(GA BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
D2113	8-719-106-71	s	DIODE RD12M-B2
D2114	8-719-071-97	s	DIODE P6KE350AG23
D2115	8-719-073-37	s	DIODE P6KE300AG23
D2116	8-719-056-85	s	DIODE UDZ-TE-17-8.2B
D2117	8-719-510-30	s	DIODE D2FL20
D2118	8-719-059-23	s	DIODE P6KE200AG23
D2119	8-719-051-96	s	DIODE FMG-G2CS
D2120	8-719-073-37	s	DIODE P6KE300AG23
D2121	8-719-051-96	s	DIODE FMG-G2CS
D2122	8-719-071-97	s	DIODE P6KE350AG23
D2123	8-719-073-37	s	DIODE P6KE300AG23
D2124	8-719-055-33	s	DIODE DIFL40
D2125	8-719-510-30	s	DIODE D2FL20
D2126	8-719-510-30	s	DIODE D2FL20
D2127	8-719-053-50	s	DIODE FCQ20A06
D2128	8-719-073-52	s	DIODE D2FS6-TA
D2129	8-719-510-41	s	DIODE D10SC9M
D2130	8-719-510-30	s	DIODE D2FL20
D2131	8-719-510-30	s	DIODE D2FL20
D2132	8-719-510-41	s	DIODE D10SC9M
D2133	8-719-056-97	s	DIODE UDZ-TE-17-27B
D2134	8-719-510-37	s	DIODE D5LC20U
D2135	8-719-510-37	s	DIODE D5LC20U
D2136	8-719-510-37	s	DIODE D5LC20U
D2137	8-719-510-37	s	DIODE D5LC20U
D2138	8-719-510-37	s	DIODE D5LC20U
D2139	8-719-510-37	s	DIODE D5LC20U
D2140	8-719-073-52	s	DIODE D2FS6-TA
D2141	8-719-073-52	s	DIODE D2FS6-TA
D2142	8-719-073-01	s	DIODE MA111-(K8).S0
D2143	8-719-073-01	s	DIODE MA111-(K8).S0
D2144	8-719-073-01	s	DIODE MA111-(K8).S0
D2145	8-719-073-01	s	DIODE MA111-(K8).S0
D2146	8-719-073-01	s	DIODE MA111-(K8).S0
D2147	8-719-045-99	s	DIODE RD2.2M-B
D2148	8-719-978-04	s	DIODE DTZ-TT11-3.3B
D2149	8-719-045-99	s	DIODE RD2.2M-B
IC2100	8-759-641-00	s	IC MC33262DR2
IC2101	8-759-490-02	s	IC TOP224Y-BB
IC2102	8-759-470-64	s	IC TOP223Y-BB
IC2103	8-759-388-23	s	IC TL431BCDR2
IC2104	8-759-100-93	s	IC UPC393G2
IC2105	8-759-388-23	s	IC TL431BCDR2
L2100	1-419-302-11	s	COIL, CHOKE 250UH
L2101	1-406-971-51	s	COIL, CHOKE 10UH
L2102	1-406-665-11	s	COIL CHOKE 100UH
L2103	1-406-665-11	s	COIL CHOKE 100UH
L2105	1-406-975-21	s	COIL, CHOKE 47UH
L2106	1-406-975-21	s	COIL, CHOKE 47UH
L2107	1-406-663-21	s	COIL CHOKE 47UH
L2108	1-406-663-21	s	COIL CHOKE 47UH
L2109	1-406-971-51	s	COIL, CHOKE 10UH
L2110	1-419-987-11	s	COIL, CHOKE
L2120	1-416-758-11	s	COIL, CHOKE 22UH
PH2100	8-749-010-64	s	PHOTO COUPLER PC123F2
PH2101	8-749-010-64	s	PHOTO COUPLER PC123F2

(GA BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q2100	8-729-041-01	s	TRANSISTOR 2SK2198
Q2101	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q2102	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q2103	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q2104	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q2105	8-729-101-07	s	TRANSISTOR 2SB798
Q2106	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q2107	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q2108	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q2109	8-729-807-51	s	TRANSISTOR 2SD1623-S
Q2110	8-729-101-07	s	TRANSISTOR 2SB798
Q2111	8-729-216-22	s	TRANSISTOR 2SA1162-G
R2079	1-218-369-11	s	RESISTOR,CHIP 2.2K 1/2W (4532)
R2085	1-216-039-00	s	RESISTOR, CHIP 390 1/10W(2012)
R2088	1-249-393-11	s	RES,CARBON 10 1/4W
R2089	1-216-675-11	s	RESISTOR,CHIP 10K 1/10W(2012)
R2090	1-216-643-11	s	RESISTOR,CHIP 470 1/10W (2012)
R2091	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2092	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2093	1-216-099-00	s	RESISTOR,CHIP 120K 1/10W(2012)
R2094	1-216-099-00	s	RESISTOR,CHIP 120K 1/10W(2012)
R2095	1-216-099-00	s	RESISTOR,CHIP 120K 1/10W(2012)
R2097	1-216-105-91	s	RESISTOR,CHIP 220K 1/10W(2125)
R2098	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2100	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R2101	1-219-363-11	s	RESISTOR, CEMENT 5.6/5W (FUSE)
R2102	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R2104	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2105	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2106	1-219-738-11	s	RES, 0.08 (REGISTOR, METAL)
R2107	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2108	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R2109	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2110	1-249-393-11	s	RES,CARBON 10 1/4W
R2111	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2112	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2113	1-218-756-11	s	RESISTOR,CHIP 150K 1/10W(2012)
R2114	1-218-756-11	s	RESISTOR,CHIP 150K 1/10W(2012)
R2115	1-218-756-11	s	RESISTOR,CHIP 150K 1/10W(2012)
R2116	1-218-759-11	s	RESISTOR,CHIP 200K 1/10W(2012)
R2117	1-218-759-11	s	RESISTOR,CHIP 200K 1/10W(2012)
R2118	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2119	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2120	1-218-369-11	s	RESISTOR,CHIP 2.2K 1/2W (4532)
R2121	1-216-681-11	s	RESISTOR,CHIP 18K 1/10W (2012)
R2122	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2124	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2125	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R2126	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2127	1-218-764-11	s	RESISTOR,CHIP 330K 1/10W(2012)
R2128	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2129	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2130	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2131	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2132	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2133	1-216-675-11	s	RESISTOR,CHIP 10K 1/10W(2012)
R2134	1-220-337-11	s	RESISTOR, SQUARE CHIP 270K
R2135	1-220-337-11	s	RESISTOR, SQUARE CHIP 270K

(GA BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R2136	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R2138	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2139	1-249-385-11	s	RES,CARBON 2.2 1/4W
R2140	1-249-389-11	s	RES,CARBON 4.7 1/4W
R2141	1-216-311-00	s	RESISTOR,CHIP 6.8 1/10W(2012)
R2142	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R2143	1-216-311-00	s	RESISTOR,CHIP 6.8 1/10W(2012)
R2144	1-216-009-00	s	RESISTOR,CHIP 22 1/10W (2012)
R2145	1-216-492-11	s	RESISTOR,METAL FILM 82K/3W
R2146	1-216-492-11	s	RESISTOR,METAL FILM 82K/3W
R2147	1-216-492-11	s	RESISTOR,METAL FILM 82K/3W
R2148	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R2149	1-216-039-00	s	RESISTOR, CHIP 390 1/10W(2012)
R2150	1-216-039-00	s	RESISTOR, CHIP 390 1/10W(2012)
R2151	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R2152	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R2153	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2154	1-215-871-11	s	RESISTOR,METAL FILM 2.2K/1W
R2155	1-215-871-11	s	RESISTOR,METAL FILM 2.2K/1W
R2156	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R2157	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R2158	1-216-683-11	s	RESISTOR,CHIP 22K 1/10W (2012)
R2159	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R2160	1-216-687-11	s	RESISTOR CHIP 33K 1/10W (2012)
R2161	1-216-029-00	s	RESISTOR,CHIP 150 1/10W(2012)
R2162	1-215-871-11	s	RESISTOR,METAL FILM 2.2K/1W
R2163	1-215-871-11	s	RESISTOR,METAL FILM 2.2K/1W
R2164	1-216-099-00	s	RESISTOR,CHIP 120K 1/10W(2012)
R2165	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2166	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R2170	1-218-756-11	s	RESISTOR,CHIP 150K 1/10W(2012)
R2171	1-218-756-11	s	RESISTOR,CHIP 150K 1/10W(2012)
R2172	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2173	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2174	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2175	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2176	1-218-760-11	s	RESISTOR,CHIP 220K 1/10W(2012)
R2177	1-216-673-11	s	RESISTOR,CHIP 8.2K 1/10W(2012)
R2179	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R2180	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2181	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2182	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R2183	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2184	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2185	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2186	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R2187	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R2188	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R2189	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R2190	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R2191	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R2192	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R2193	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2194	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2195	1-216-067-00	s	RESISTOR,CHIP 5.6K 1/10W(2012)
R2196	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R2197	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R2198	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)

(GA BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
T2100 ⚠	1-435-145-11	s	TRANSFORMER, CONVERTER (SRT)
T2101 ⚠	1-435-144-11	s	TRANSFORMER, CONVERTER (SRT)

GB BOARD

Ref. No. or Q'ty	Part No.	SP	Description
C2300	1-126-397-11	s	CAPACITOR ELECT 33MF/25V(CHIP)
C2301	1-110-501-11	s	CAPACITOR CERAMIC 0.33MF/16V
C2302	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2303	1-164-506-11	s	CAPACITOR,CERAMIC 4.7MF/16V
C2304	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2307	1-115-781-11	s	CAPACITOR,ELECT 220MF/25V(105C
C2308	1-115-734-11	s	CAPACITOR ELECT 680MF/10V(105)
C2310	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2311	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
CN2300	1-774-245-11	o	CONNECTOR, BOARD TO BOARD 8P
CN2301	1-564-508-11	o	PLUG,CONNECTOR (5P)
D2300	8-719-056-97	s	DIODE UDZ-TE-17-27B
D2301	8-719-104-34	s	DIODE 1S2836
D2302	8-719-055-30	s	DIODE D1FS4A-TA
IC2300	8-759-389-95	s	IC MAX797ESE-TE2
L2300	1-406-974-41	s	COIL, CHOKE 33UH
L2301	1-416-949-21	s	COIL, CHOKE (SMD)
Q2300	8-729-048-98	s	TRANSISTOR 2SK2281-4061
Q2301	8-729-048-98	s	TRANSISTOR 2SK2281-4061
R2302	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2304	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2305	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2306	1-243-631-11	s	FIXED RESISTOR 30M
R2308	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2309	1-216-295-00	s	CONDUCTOR, CHIP (2012)

GC BOARD

Ref. No. or Q'ty	Part No.	SP	Description
C2500	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C2501	1-110-501-11	s	CAPACITOR CERAMIC 0.33MF/16V
C2502	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2503	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2504	1-164-506-11	s	CAPACITOR,CERAMIC 4.7MF/16V
C2507	1-115-737-11	s	CAPACITOR,ELECT 1000MF/10V
C2510	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2511	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
CN2500	1-774-245-11	o	CONNECTOR, BOARD TO BOARD 8P
CN2502	1-564-509-11	o	PLUG,CONNECTOR (6P)
D2500	8-719-056-97	s	DIODE UDZ-TE-17-27B
D2501	8-719-104-34	s	DIODE 1S2836
D2502	8-719-055-30	s	DIODE D1FS4A-TA
IC2500	8-759-389-95	s	IC MAX797ESE-TE2
L2500	1-416-606-11	s	COIL, CHOKE (SMD)
Q2500	8-729-048-98	s	TRANSISTOR 2SK2281-4061
Q2501	8-729-048-98	s	TRANSISTOR 2SK2281-4061
R2502	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2504	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2505	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2506	1-240-182-11	s	RESISTOR,SQURE TYPE 47M
R2508	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R2509	1-216-295-00	s	CONDUCTOR, CHIP (2012)

GD BOARD

Ref. No. or Q'ty	Part No.	SP	Description
C2700	1-126-400-11	s	CAPACITOR ELECT 22MF/35V(CHIP)
C2701	1-110-501-11	s	CAPACITOR CERAMIC 0.33MF/16V
C2702	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2703	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2704	1-164-506-11	s	CAPACITOR,CERAMIC 4.7MF/16V
C2705	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2706	1-126-397-11	s	CAPACITOR ELECT 33MF/25V(CHIP)
C2707	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2708	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C2709	1-111-066-11	s	CAPACITOR,ELECT 820MF/25V 105
C2710	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2711	1-126-397-11	s	CAPACITOR ELECT 33MF/25V(CHIP)
C2713	1-115-339-11	s	CAPACITOR,CERAMIC 0.1MF/50V
C2726	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
CN2700	1-774-245-11	o	CONNECTOR, BOARD TO BOARD 8P
CN2701	1-564-714-11	o	PIN, CONNECTOR (12P)
D2700	8-719-056-97	s	DIODE UDZ-TE-17-27B
D2701	8-719-104-34	s	DIODE 1S2836
D2702	8-719-055-30	s	DIODE D1FS4A-TA
IC2700	8-759-389-95	s	IC MAX797ESE-TE2
IC2701	8-759-388-31	s	IC PQ20VZ1U
IC2702	8-759-388-31	s	IC PQ20VZ1U
L2700	1-416-606-11	s	COIL, CHOKE (SMD)
Q2700	8-729-048-98	s	TRANSISTOR 2SK2281-4061
Q2701	8-729-048-98	s	TRANSISTOR 2SK2281-4061
R2701	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R2702	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R2703	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R2704	1-216-643-11	s	RESISTOR,CHIP 470 1/10W (2012)
R2705	1-216-686-11	s	RESISTOR,CHIP 30K 1/10W
R2706	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R2707	1-216-642-11	s	RESISTOR,CHIP 430 1/10W (2012)
R2708	1-216-671-11	s	RESISTOR,CHIP 6.8K 1/10W(2012)
R2709	1-240-216-11	s	RESISTOR,SQUARE TYPE 60M
R2710	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R2711	1-216-642-11	s	RESISTOR,CHIP 430 1/10W (2012)
R2712	1-216-671-11	s	RESISTOR,CHIP 6.8K 1/10W(2012)
R2713	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R2714	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R2715	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R2716	1-216-642-11	s	RESISTOR,CHIP 430 1/10W (2012)
R2717	1-216-687-11	s	RESISTOR CHIP 33K 1/10W (2012)
R2718	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2719	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2012)
R2720	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2722	1-216-687-11	s	RESISTOR CHIP 33K 1/10W (2012)
RV2100	1-225-895-11	s	RESISTOR ADJ.CERMET(3TYPE)1K
RV2101	1-225-895-11	s	RESISTOR ADJ.CERMET(3TYPE)1K

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H BOARD

Ref. No. or Q'ty	Part No.	SP	Description	
1pc	A-1375-193-A	o	MOUNTED CIRCUIT BOARD, H	
CN3501	1-573-290-21	s	PIN,CONNECTOR (4P)(SMD)(1.5MM)	
CN3502	1-580-055-21	o	PIN, CONNECTOR 2P	
CN3503	1-580-055-21	o	PIN, CONNECTOR 2P	
D3500	8-719-045-53	s	DIODE SEC1801C	
D3501	8-719-045-53	s	DIODE SEC1801C	
D3502	8-719-045-53	s	DIODE SEC1801C	
D3503	8-719-045-53	s	DIODE SEC1801C	
D3504	8-719-045-53	s	DIODE SEC1801C	
D3505	8-719-045-53	s	DIODE SEC1801C	
D3506	8-719-045-53	s	DIODE SEC1801C	
D3507	8-719-045-60	s	DIODE SEC1401C	
D3508	8-719-045-53	s	DIODE SEC1801C	
D3509	8-719-045-53	s	DIODE SEC1801C	
D3510	8-719-045-53	s	DIODE SEC1801C	
D3511	8-719-045-53	s	DIODE SEC1801C	
D3512	8-719-045-53	s	DIODE SEC1801C	
D3513	8-719-045-53	s	DIODE SEC1801C	
D3514	8-719-045-53	s	DIODE SEC1801C	
D3515	8-719-045-53	s	DIODE SEC1801C	
D3520	8-719-045-53	s	DIODE SEC1801C	
D3523	8-719-045-53	s	DIODE SEC1801C	
D3525	8-719-045-53	s	DIODE SEC1801C	
D3526	8-719-045-53	s	DIODE SEC1801C	
D3527	8-719-045-60	s	DIODE SEC1401C	
D3528	8-719-045-53	s	DIODE SEC1801C	
D3529	8-719-045-53	s	DIODE SEC1801C	
D3532	8-719-045-53	s	DIODE SEC1801C	
D3540	8-719-045-61	s	DIODE SEC1901C	
D3541	8-719-045-61	s	DIODE SEC1901C	
D3543	8-719-045-53	s	DIODE SEC1801C	
D3544	8-719-045-51	s	DIODE SEC2422C	
D3550	8-719-914-43	s	DIODE DAN202K	
D3551	8-719-914-43	s	DIODE DAN202K	
D3552	8-719-914-43	s	DIODE DAN202K	
D3553	8-719-914-43	s	DIODE DAN202K	
D3554	8-719-914-44	s	DIODE DAP202K	(DUAL)
D3555	8-719-914-44	s	DIODE DAP202K	(DUAL)
D3556	8-719-914-44	s	DIODE DAP202K	(DUAL)
D3557	8-719-914-44	s	DIODE DAP202K	(DUAL)
Q3540	8-729-230-49	s	TRANSISTOR 2SC2712-YG	
Q3541	8-729-230-49	s	TRANSISTOR 2SC2712-YG	
Q3542	8-729-027-38	s	TRANSISTOR DTA144EAK-T146	
R3500	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)	
R3501	1-216-075-00	s	RESISTOR CHIP 12K 1/10W(2012)	
R3502	1-216-069-00	s	RESISTOR,CHIP 6.8K 1/10W(2012)	
R3503	1-216-063-91	s	RESISTOR,CHIP 3.9K 1/10W(2125)	
R3504	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)	
R3505	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)	
R3506	1-216-053-00	s	RESISTOR CHIP 1.5K 1/10W(2012)	
R3507	1-216-055-00	s	RESISTOR CHIP 1.8K 1/10W(2012)	
R3508	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)	
R3509	1-216-075-00	s	RESISTOR CHIP 12K 1/10W(2012)	
R3510	1-216-069-00	s	RESISTOR,CHIP 6.8K 1/10W(2012)	
R3511	1-216-063-91	s	RESISTOR,CHIP 3.9K 1/10W(2125)	
R3512	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)	
R3513	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)	

(H BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R3514	1-216-053-00	s	RESISTOR CHIP 1.5K 1/10W(2012)
R3515	1-216-055-00	s	RESISTOR CHIP 1.8K 1/10W(2012)
R3516	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3517	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3520	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3522	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3523	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3524	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3525	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3526	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3527	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R3529	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3532	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3533	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3534	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3540	1-216-061-00	s	RESISTOR CHIP 3.3K 1/10W(2012)
R3541	1-216-061-00	s	RESISTOR CHIP 3.3K 1/10W(2012)
R3542	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R3544	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R3545	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3546	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3550	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3552	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3553	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3554	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3555	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3556	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3557	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R3559	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3562	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3563	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R3564	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
S3500	1-692-453-11	s	SWITCH,KEY BOARD
S3501	1-692-453-11	s	SWITCH,KEY BOARD
S3502	1-692-453-11	s	SWITCH,KEY BOARD
S3503	1-692-453-11	s	SWITCH,KEY BOARD
S3504	1-692-453-11	s	SWITCH,KEY BOARD
S3505	1-692-453-11	s	SWITCH,KEY BOARD
S3506	1-692-453-11	s	SWITCH,KEY BOARD
S3507	1-692-453-11	s	SWITCH,KEY BOARD
S3508	1-692-453-11	s	SWITCH,KEY BOARD
S3509	1-692-453-11	s	SWITCH,KEY BOARD
S3512	1-692-453-11	s	SWITCH,KEY BOARD
S3513	1-692-453-11	s	SWITCH,KEY BOARD
S3514	1-692-453-11	s	SWITCH,KEY BOARD
S3515	1-692-453-11	s	SWITCH,KEY BOARD

K BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1385-189-A	o	MOUNTED CIRCUIT BOARD, K
1pc	4-032-770-81	o	HEAT SINK, V-OUT
1pc	7-682-648-09	s	SCREW +PS 3X8
C2900	1-126-200-11	s	CAPACITOR,ELECT 10MF/35V
C2901	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
C2902	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C2903	1-164-505-11	s	CAPACITOR,CHIP CERAMIC 2.2MF
C2904	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C2905	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C2906	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C2907	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C2908	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
CN2900	1-580-056-21	o	PIN,CONNECTOR 3P
CN2901	1-580-055-21	o	PIN, CONNECTOR 2P
CN2903	1-580-055-21	o	PIN, CONNECTOR 2P
FL2001	1-233-736-21	s	FILTER, EMI
IC2900	8-759-980-43	s	IC TDA2009A
Q2900	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q2901	8-729-230-49	s	TRANSISTOR 2SC2712-YG
R2900	1-216-075-00	s	RESISTOR CHIP 12K 1/10W(2012)
R2901	1-216-075-00	s	RESISTOR CHIP 12K 1/10W(2012)
R2902	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R2903	1-216-061-00	s	RESISTOR CHIP 3.3K 1/10W(2012)
R2904	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R2905	1-216-643-11	s	RESISTOR,CHIP 470 1/10W (2012)
R2906	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R2907	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R2908	1-216-021-00	s	RESISTOR,CHIP 68 1/10W(2012)
R2909	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)
R2910	1-216-021-00	s	RESISTOR,CHIP 68 1/10W(2012)
R2911	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)
R2912	1-249-385-11	s	RES,CARBON 2.2 1/4W
R2913	1-249-385-11	s	RES,CARBON 2.2 1/4W
R2914	1-216-635-11	s	RESISTOR,CHIP 220 1/10W (2012)

KS BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1385-190-A	o	MOUNTED CIRCUIT BOARD, KS
C2950	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C2951	1-164-489-11	s	CAPACITOR,CHIP CERAMIC 0.22MF
C2952	1-163-023-00	s	CAPACITOR,CHIP CERAMIC 0.015MF
C2953	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C2954	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C2955	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C2956	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C2957	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C2958	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C2959	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C2960	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C2961	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C2962	1-164-489-11	s	CAPACITOR,CHIP CERAMIC 0.22MF
C2963	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C2964	1-163-023-00	s	CAPACITOR,CHIP CERAMIC 0.015MF
C2965	1-126-200-11	s	CAPACITOR,ELECT 10MF/35V
C2966	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
C2967	1-128-401-11	s	CAPACITOR,ELECT100MF/25V(CHIP)
CN2951	1-766-376-11	o	PIN, CONNECTOR (1.5MM)(SMD) 9P
CN2952	1-580-057-11	o	PIN,CONNECTOR 4P
IC2950	8-759-524-84	s	IC TEA2025D-013TR
IC2951	8-759-460-81	s	IC BA12FP-E2
Q2950	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q2951	8-729-230-49	s	TRANSISTOR 2SC2712-YG
R2950	1-216-665-11	s	RESISTOR,CHIP 3.9K 1/10W(2012)
R2951	1-216-646-11	s	RESISTOR,CHIP 620 1/10W (2012)
R2952	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2953	1-216-665-11	s	RESISTOR,CHIP 3.9K 1/10W(2012)
R2954	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R2955	1-216-075-00	s	RESISTOR CHIP 12K 1/10W(2012)
R2956	1-216-075-00	s	RESISTOR CHIP 12K 1/10W(2012)
R2957	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R2958	1-216-061-00	s	RESISTOR CHIP 3.3K 1/10W(2012)
R2959	1-216-646-11	s	RESISTOR,CHIP 620 1/10W (2012)
R2960	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R2961	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)

NF BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-675-457-11	o	PRINTED WIRING BOARD, NF
C3600	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
CN3600	1-691-550-11	s	PIN,CONNECTOR (3P)(SMD)(1.5MM)
IC3600	8-749-012-17	s	IC RS-140-T
R3600	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3601	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)

NR BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1390-974-A	o	MOUNTED CIRCUIT BOARD, NR
C3700	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
CN3700	1-580-056-21	o	PIN,CONNECTOR 3P
IC3700	8-749-012-17	s	IC RS-140-T
R3700	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3701	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)

QA BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1275-178-A	o	MOUNTED CIRCUIT BOARD, QA
C801	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C802	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C803	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C804	1-128-453-21	s	CAPACITOR,ELECT 47MF
C805	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C806	1-113-701-21	s	CAPACITOR,ELECT 22MF/16V (NP)
C807	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C808	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C809	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C810	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C811	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C812	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C813	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C816	1-125-817-11	s	CAPACITOR, CERAMIC 10MF/6.3V
C817	1-125-817-11	s	CAPACITOR, CERAMIC 10MF/6.3V
C820	1-109-982-11	s	CAPACITOR,CHIP CERAMIC 1MF/10V
C821	1-164-344-11	s	CAPACITOR CERAMIC 68000PF (M-)
C822	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C824	1-163-259-91	s	CAPACITOR,CHIP CERAMIC 220PF
C825	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C826	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C827	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C828	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C829	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C830	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C831	1-163-137-00	s	CAPACITOR,CHIP CERAMIC 680PF
C832	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C833	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C834	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C835	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C836	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C837	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C838	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C839	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C840	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C841	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C842	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C843	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C844	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C845	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C846	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C847	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C848	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C849	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C850	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C851	1-128-453-21	s	CAPACITOR,ELECT 47MF
C852	1-128-453-21	s	CAPACITOR,ELECT 47MF
C853	1-128-453-21	s	CAPACITOR,ELECT 47MF
C854	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C855	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C856	1-163-217-11	s	CAPACITOR CHIP CERAMIC 1PF/50V
C857	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C858	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C859	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C860	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C861	1-163-217-11	s	CAPACITOR CHIP CERAMIC 1PF/50V
C862	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V

(QA BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C863	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C864	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C865	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C866	1-163-217-11	s	CAPACITOR CHIP CERAMIC 1PF/50V
C867	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C868	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C869	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C870	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C871	1-128-399-11	s	CAPACITOR ELECT 330MF/16V(CHIP
C872	1-128-399-11	s	CAPACITOR ELECT 330MF/16V(CHIP
C873	1-128-399-11	s	CAPACITOR ELECT 330MF/16V(CHIP
C874	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C875	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C876	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C877	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C878	1-128-013-11	s	CAPACITOR ERECT 1MF/50V
C879	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C880	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C881	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C882	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C883	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C884	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C885	1-128-013-11	s	CAPACITOR ERECT 1MF/50V
C886	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C887	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C888	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C891	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C892	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C893	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C894	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C895	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C896	1-126-603-11	s	CAPACITOR,ELECT 4.7MF/35V
C897	1-126-603-11	s	CAPACITOR,ELECT 4.7MF/35V
C898	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C899	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C900	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C901	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C902	1-126-206-11	s	CAPACITOR, ELECT 100MF/6.3V
C903	1-126-603-11	s	CAPACITOR,ELECT 4.7MF/35V
C904	1-126-603-11	s	CAPACITOR,ELECT 4.7MF/35V
C905	1-126-603-11	s	CAPACITOR,ELECT 4.7MF/35V
C906	1-126-603-11	s	CAPACITOR,ELECT 4.7MF/35V
C907	1-126-603-11	s	CAPACITOR,ELECT 4.7MF/35V
C908	1-126-603-11	s	CAPACITOR,ELECT 4.7MF/35V
C909	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C911	1-164-161-11	s	CAPACITOR, CERAMIC 2200PF/100V
C912	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C914	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C915	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C916	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C917	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C920	1-164-161-11	s	CAPACITOR, CERAMIC 2200PF/100V
C921	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C922	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C923	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C924	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C925	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C926	1-117-681-11	s	CAPACITOR, ELECT 100MF/16V
C927	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V

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Ref. No. or Q'ty	Part No.	SP	Description
C928	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C929	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C930	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C931	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C936	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C937	1-163-023-00	s	CAPACITOR,CHIP CERAMIC 0.015MF
C938	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C939	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C940	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C941	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C942	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C943	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C944	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C945	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C946	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C947	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C948	1-107-682-11	s	CAPACITOR,CHIP 1MF/16V (3216)
C949	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C950	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C951	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C952	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C953	1-128-065-11	s	CAPACITOR ELECT 68MF/10V(CHIP)
C954	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C955	1-128-065-11	s	CAPACITOR ELECT 68MF/10V(CHIP)
C958	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C959	1-110-666-11	s	CAPACITOR,ELECT 22MF/6.3V(BP)
C960	1-128-453-21	s	CAPACITOR,ELECT 47MF
C961	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C962	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C963	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C964	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C965	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C966	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C967	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C968	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C969	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C970	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C971	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C972	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C973	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C974	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C975	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C976	1-164-506-11	s	CAPACITOR,CERAMIC 4.7MF/16V
C977	1-164-506-11	s	CAPACITOR,CERAMIC 4.7MF/16V
C978	1-113-701-21	s	CAPACITOR,ELECT 22MF/16V (NP)
C979	1-164-506-11	s	CAPACITOR,CERAMIC 4.7MF/16V
C980	1-128-453-21	s	CAPACITOR,ELECT 47MF
C981	1-113-701-21	s	CAPACITOR,ELECT 22MF/16V (NP)
C982	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C983	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
C984	1-128-004-11	s	CAPACITOR ERECT 10MF/16V(CHIP)
CN801	1-785-305-21	o	CONNECTOR, BOARD TO BOARD
CN802	1-785-305-21	o	CONNECTOR, BOARD TO BOARD
CN803	1-793-798-21	o	CONNECTOR, BOARD TO BOARD
CN804	1-793-798-21	o	CONNECTOR, BOARD TO BOARD
CN805	1-793-798-21	o	CONNECTOR, BOARD TO BOARD
CN806	1-793-798-21	o	CONNECTOR, BOARD TO BOARD
CN807	1-580-057-11	o	PIN,CONNECTOR 4P

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Ref. No. or Q'ty	Part No.	SP	Description
CN808	1-580-055-21	o	PIN, CONNECTOR 2P
CN809	1-580-056-21	o	PIN,CONNECTOR 3P
CN810	1-760-388-11	o	CONNECTOR PIN (SMD) 9 PIN
D801	8-719-800-76	s	DIODE 1SS226
D802	8-719-800-76	s	DIODE 1SS226
D803	8-719-800-76	s	DIODE 1SS226
D804	8-719-800-76	s	DIODE 1SS226
D805	8-719-800-76	s	DIODE 1SS226
D807	8-719-800-76	s	DIODE 1SS226
D808	8-719-800-76	s	DIODE 1SS226
D809	8-719-800-76	s	DIODE 1SS226
D810	8-719-800-76	s	DIODE 1SS226
D811	8-719-800-76	s	DIODE 1SS226
D812	8-719-800-76	s	DIODE 1SS226
D813	8-719-914-43	s	DIODE DAN202K
D814	8-719-800-76	s	DIODE 1SS226
D815	8-719-914-43	s	DIODE DAN202K
D816	8-719-800-76	s	DIODE 1SS226
D817	8-719-800-76	s	DIODE 1SS226
D818	8-719-800-76	s	DIODE 1SS226
D819	8-719-800-76	s	DIODE 1SS226
D820	8-719-800-76	s	DIODE 1SS226
D821	8-719-800-76	s	DIODE 1SS226
D822	8-719-800-76	s	DIODE 1SS226
D823	8-719-800-76	s	DIODE 1SS226
D824	8-719-158-37	s	DIODE RD9.1SB2
D825	8-719-158-37	s	DIODE RD9.1SB2
D826	8-719-988-61	s	DIODE 1SS355TE-17
D827	8-719-988-61	s	DIODE 1SS355TE-17
D831	8-719-422-12	s	DIODE MA8039
D832	8-719-422-12	s	DIODE MA8039
D833	8-719-158-15	s	DIODE RD5.6SB
D834	8-719-422-12	s	DIODE MA8039
D835	8-719-422-12	s	DIODE MA8039
D836	8-719-158-37	s	DIODE RD9.1SB2
D837	8-719-158-37	s	DIODE RD9.1SB2
D838	8-719-158-37	s	DIODE RD9.1SB2
D839	8-719-158-37	s	DIODE RD9.1SB2
D840	8-719-158-37	s	DIODE RD9.1SB2
D841	8-719-158-37	s	DIODE RD9.1SB2
D842	8-719-036-76	s	DIODE RD3.3SB2-T1
D843	8-719-914-43	s	DIODE DAN202K
D844	8-719-914-43	s	DIODE DAN202K
D845	8-719-036-76	s	DIODE RD3.3SB2-T1
D846	8-719-158-37	s	DIODE RD9.1SB2
D847	8-719-158-37	s	DIODE RD9.1SB2
D848	8-719-158-37	s	DIODE RD9.1SB2
D871	8-719-058-24	s	DIODE RB501V-40TE17
D872	8-719-058-24	s	DIODE RB501V-40TE17
FB801	1-414-234-11	s	INDUCTOR,FERRITE BEAD
FB802	1-414-234-11	s	INDUCTOR,FERRITE BEAD
FB803	1-414-234-11	s	INDUCTOR,FERRITE BEAD
FB804	1-414-234-11	s	INDUCTOR,FERRITE BEAD
FL802	1-239-466-21	s	FILTER, EMI
FL803	1-239-466-21	s	FILTER, EMI
FL804	1-469-577-11	s	FILTER, EMI
IC801	8-759-491-93	s	IC EL4332CS-TE2

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Ref. No. or Q'ty	Part No.	SP	Description
IC802	8-759-646-02	s	IC M52347FP-TE
IC803	8-759-174-16	s	IC TC74VHC244F
IC804	8-759-185-75	s	IC TC74VHC123AF (EL)
IC805	8-759-457-53	s	IC GS1881-CTA
IC806	8-752-072-81	s	IC CXA1875AM
IC807	8-752-072-81	s	IC CXA1875AM
IC808	8-759-542-11	s	IC MAX4223ESA-TG06
IC809	8-759-542-11	s	IC MAX4223ESA-TG06
IC810	8-759-542-11	s	IC MAX4223ESA-TG06
IC811	8-759-523-01	s	IC TC74HC4052AFT(EL)
IC812	8-759-700-78	s	IC NJM082M
IC813	8-759-092-80	s	IC SN75157PS
IC814	8-759-090-19	s	IC SN75453BPS
IC816	8-759-460-79	s	IC BA09FP-E2
IC817	8-759-157-17	s	IC PQ05SZ1U
IC818	8-759-539-89	s	IC LM2990SX-5.0
IC819	8-752-074-42	s	IC CXA1946AR
IC821	8-759-983-69	s	IC LM358PS
IC822	8-759-655-59	s	IC UPD16875G-E2
IC823	8-759-422-82	s	IC HA4314BCB-E2
IC824	8-759-422-82	s	IC HA4314BCB-E2
IC825	8-759-422-82	s	IC HA4314BCB-E2
L801	1-414-235-22	s	INDUCTOR, FERRITE BEAD
L802	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L803	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L804	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L805	1-412-058-11	s	INDUCTOR,SMALL TYPE 10UH
L808	1-412-363-11	s	FERRITE, EMI (SMD)
L809	1-412-363-11	s	FERRITE, EMI (SMD)
L810	1-412-363-11	s	FERRITE, EMI (SMD)
L811	1-412-363-11	s	FERRITE, EMI (SMD)
L812	1-412-363-11	s	FERRITE, EMI (SMD)
L813	1-412-363-11	s	FERRITE, EMI (SMD)
L814	1-412-363-11	s	FERRITE, EMI (SMD)
L815	1-412-363-11	s	FERRITE, EMI (SMD)
L816	1-414-235-22	s	INDUCTOR, FERRITE BEAD
L817	1-412-060-11	s	INDUCTOR,SMALL TYPE 22 10%
Q802	8-729-900-53	s	TRANSISTOR DTC114EK
Q805	8-729-112-65	s	TRANSISTOR 2SA1462
Q808	8-729-900-53	s	TRANSISTOR DTC114EK
Q809	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q810	8-729-900-53	s	TRANSISTOR DTC114EK
Q811	8-729-107-31	s	TRANSISTOR 2SC3545
Q812	8-729-107-31	s	TRANSISTOR 2SC3545
Q813	8-729-107-31	s	TRANSISTOR 2SC3545
Q821	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q822	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q823	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q824	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q825	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q826	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q831	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q832	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q833	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q834	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q835	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q836	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q837	8-729-230-49	s	TRANSISTOR 2SC2712-YG

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Ref. No. or Q'ty	Part No.	SP	Description
Q838	8-729-230-49	s	TRANSISTOR 2SC2712-YG
R801	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R802	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R803	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R804	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R805	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R806	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R807	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R808	1-216-013-00	s	RESISTOR,CHIP 33 1/10W(2012)
R809	1-216-043-91	s	RESISTOR, CHIP 560 1/10W(2125)
R810	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R811	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R812	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R813	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R814	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R815	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R816	1-216-013-00	s	RESISTOR,CHIP 33 1/10W(2012)
R817	1-216-043-91	s	RESISTOR, CHIP 560 1/10W(2125)
R818	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R819	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R821	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R822	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R823	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R824	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R825	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R826	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R827	1-216-079-00	s	RESISTOR CHIP 18K 1/10W(2012)
R828	1-216-071-00	s	RESISTOR,CHIP 8.2K 1/10W(2012)
R829	1-216-625-11	s	RESISTOR,CHIP 82 1/10W
R830	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)
R831	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R832	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R833	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R834	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R835	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R836	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R837	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R838	1-216-653-11	s	RESISTOR,CHIP 1.2K 1/10W(2012)
R839	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R840	1-216-639-11	s	RESISTOR,CHIP 330 1/10W (2012)
R841	1-216-639-11	s	RESISTOR,CHIP 330 1/10W (2012)
R842	1-216-653-11	s	RESISTOR,CHIP 1.2K 1/10W(2012)
R843	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R845	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R846	1-216-666-11	s	RESISTOR,CHIP 4.3K 1/10W(2012)
R847	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R848	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R849	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R850	1-216-690-11	s	RESISTOR,CHIP 43K 1/10W(2012)
R851	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R853	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R854	1-216-629-11	s	RESISTOR,CHIP 120 1/10W (2012)
R855	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R856	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R857	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R858	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R859	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2012)
R860	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2012)

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Ref. No. or Q'ty	Part No.	SP	Description
R861	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2012)
R862	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R863	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R864	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R865	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R866	1-218-767-11	s	RESISTOR,CHIP 430K 1/10W(2012)
R867	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R868	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R869	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R870	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R871	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R872	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R873	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R874	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R875	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R876	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R877	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R878	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R879	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R880	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R881	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R882	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R883	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R884	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R885	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R886	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R887	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R888	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R889	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R890	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R891	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R894	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R895	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2012)
R897	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R899	1-216-063-91	s	RESISTOR,CHIP 3.9K 1/10W(2125)
R900	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R901	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R902	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R903	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R904	1-216-063-91	s	RESISTOR,CHIP 3.9K 1/10W(2125)
R905	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R906	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R907	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R908	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R909	1-216-063-91	s	RESISTOR,CHIP 3.9K 1/10W(2125)
R910	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R911	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R912	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R913	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R914	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R915	1-216-013-00	s	RESISTOR,CHIP 33 1/10W(2012)
R916	1-216-043-91	s	RESISTOR, CHIP 560 1/10W(2125)
R917	1-216-029-00	s	RESISTOR,CHIP 150 1/10W(2012)
R918	1-216-029-00	s	RESISTOR,CHIP 150 1/10W(2012)
R919	1-216-029-00	s	RESISTOR,CHIP 150 1/10W(2012)
R920	1-216-029-00	s	RESISTOR,CHIP 150 1/10W(2012)
R921	1-216-029-00	s	RESISTOR,CHIP 150 1/10W(2012)
R922	1-216-029-00	s	RESISTOR,CHIP 150 1/10W(2012)
R923	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)

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Ref. No. or Q'ty	Part No.	SP	Description
R924	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R925	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R926	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R927	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R928	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R929	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R930	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R931	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R932	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R941	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R942	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R943	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R944	1-216-001-00	s	RESISTOR, CHIP 10 1/10W(2012)
R945	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R946	1-216-635-11	s	RESISTOR,CHIP 220 1/10W (2012)
R947	1-216-635-11	s	RESISTOR,CHIP 220 1/10W (2012)
R948	1-216-001-00	s	RESISTOR, CHIP 10 1/10W(2012)
R949	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R950	1-216-635-11	s	RESISTOR,CHIP 220 1/10W (2012)
R951	1-216-635-11	s	RESISTOR,CHIP 220 1/10W (2012)
R952	1-216-001-00	s	RESISTOR, CHIP 10 1/10W(2012)
R953	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R954	1-216-635-11	s	RESISTOR,CHIP 220 1/10W (2012)
R955	1-216-635-11	s	RESISTOR,CHIP 220 1/10W (2012)
R956	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R957	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R958	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R959	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R960	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R961	1-216-631-11	s	RESISTOR,CHIP 150 1/10W (2012)
R962	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R963	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R964	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R965	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R966	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R967	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R968	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R969	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R970	1-216-041-00	s	RESISTOR, CHIP 470 1/10W(2012)
R971	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R972	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R973	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R974	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R975	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R976	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R977	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R978	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R979	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R980	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R981	1-216-101-00	s	RESISTOR CHIP 150K 1/10W(2012)
R982	1-216-099-00	s	RESISTOR,CHIP 120K 1/10W(2012)
R983	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R984	1-216-013-00	s	RESISTOR,CHIP 33 1/10W(2012)
R985	1-216-013-00	s	RESISTOR,CHIP 33 1/10W(2012)
R987	1-216-001-00	s	RESISTOR, CHIP 10 1/10W(2012)
R988	1-216-186-00	s	RESISTOR,CHIP 330 1/8W (3216)
R989	1-216-186-00	s	RESISTOR,CHIP 330 1/8W (3216)
R990	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R991	1-216-186-00	s	RESISTOR,CHIP 330 1/8W (3216)

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Ref. No. or Q'ty	Part No.	SP	Description
R992	1-216-186-00	s	RESISTOR,CHIP 330 1/8W (3216)
R993	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R994	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R995	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R997	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R998	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R999	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1000	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R1001	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1002	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1003	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1004	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1005	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1006	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R1007	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1008	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R1009	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R1010	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R1011	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1013	1-216-095-00	s	RESISTOR, CHIP 82K 1/10W(2012)
R1014	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1015	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
R1016	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
R1017	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1018	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1019	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1021	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1022	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1031	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R1032	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R1033	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R1034	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R1035	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
R1036	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
R1037	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
R1038	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
R1039	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
R1040	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
R1042	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1043	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1044	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1046	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1047	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1048	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1049	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R1050	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1051	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1052	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R1053	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1061	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1064	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1065	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1068	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1069	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1070	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1071	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1072	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1073	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1074	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)

(QA BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1075	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1076	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1077	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1078	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1079	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1080	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1081	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1082	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1083	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1084	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1085	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1086	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)
R1087	1-216-668-11	s	RESISTOR,CHIP 5.1K 1/10W(2012)
R1088	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1089	1-216-668-11	s	RESISTOR,CHIP 5.1K 1/10W(2012)
R1090	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)
R1091	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1092	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1093	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1094	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1095	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1096	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R1097	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R1100	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
TH801	1-809-020-11	s	THERMISTOR

QB BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1275-180-A	o	MOUNTED CIRCUIT BOARD, QB
C1201	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C1202	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1203	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1204	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1205	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1206	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1207	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1208	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1209	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1210	1-163-231-11	s	CAPACITOR,CHIP CERAMIC15PF/50V
C1211	1-163-231-11	s	CAPACITOR,CHIP CERAMIC15PF/50V
CN1201	1-778-830-21	s	CONNECTOR (BUS)
CN1202	1-784-828-11	s	CONNECTOR, D SUB
CN1203	1-793-797-21	o	CONNECTOR, BOARD TO BOARD
CN1204	1-793-797-21	o	CONNECTOR, BOARD TO BOARD
D1201	8-719-158-15	s	DIODE RD5.6SB
D1202	8-719-058-24	s	DIODE RB501V-40TE17
D1203	8-719-158-15	s	DIODE RD5.6SB
D1204	8-719-158-15	s	DIODE RD5.6SB
D1205	8-719-158-15	s	DIODE RD5.6SB
D1206	8-719-158-15	s	DIODE RD5.6SB
D1207	8-719-158-15	s	DIODE RD5.6SB
D1208	8-719-158-15	s	DIODE RD5.6SB
D1209	8-719-988-61	s	DIODE 1SS355TE-17
D1210	8-719-058-24	s	DIODE RB501V-40TE17
D1211	8-719-158-15	s	DIODE RD5.6SB
D1212	8-719-988-61	s	DIODE 1SS355TE-17
D1214	8-719-988-61	s	DIODE 1SS355TE-17
D1215	8-719-988-61	s	DIODE 1SS355TE-17
D1216	8-719-158-37	s	DIODE RD9.1SB2
D1217	8-719-158-15	s	DIODE RD5.6SB
D1218	8-719-058-24	s	DIODE RB501V-40TE17
D1219	8-719-158-15	s	DIODE RD5.6SB
D1220	8-719-158-15	s	DIODE RD5.6SB
D1221	8-719-158-15	s	DIODE RD5.6SB
D1222	8-719-158-15	s	DIODE RD5.6SB
D1223	8-719-158-15	s	DIODE RD5.6SB
D1224	8-719-158-15	s	DIODE RD5.6SB
D1225	8-719-158-15	s	DIODE RD5.6SB
D1226	8-719-158-15	s	DIODE RD5.6SB
D1227	8-719-158-15	s	DIODE RD5.6SB
IC1201	8-759-697-26	s	IC RCV4-A1T-MASK-25
IC1202	8-759-661-55	s	IC ST24FC21M6TR
IC1203	8-759-925-72	s	IC SN74HC02ANS
IC1204	8-759-542-91	s	IC S-80840ANUP-ED4-T2
J1201	1-793-994-11	s	CONNECTOR, USB
J1202	1-779-677-11	s	CONNECTOR, USB (B)
J1203	1-566-822-21	s	JACK
Q1201	1-801-806-11	s	TRANSISTOR DTC144EAK
Q1202	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q1203	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q1204	8-729-216-22	s	TRANSISTOR 2SA1162-G
R1201	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1202	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1203	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)

(QB BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1204	1-216-067-00	s	RESISTOR,CHIP 5.6K 1/10W(2012)
R1205	1-216-063-91	s	RESISTOR,CHIP 3.9K 1/10W(2125)
R1206	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1207	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1208	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1209	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)
R1210	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R1211	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1212	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1213	1-216-067-00	s	RESISTOR,CHIP 5.6K 1/10W(2012)
R1214	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1215	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1216	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1217	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1218	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1219	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R1220	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1221	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1222	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1223	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R1224	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R1225	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1226	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1227	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1228	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1229	1-216-053-00	s	RESISTOR CHIP 1.5K 1/10W(2012)
R1230	1-216-121-00	s	RESISTOR CHIP 1M 1/10W(2012)
R1231	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R1232	1-216-121-00	s	RESISTOR CHIP 1M 1/10W(2012)
R1233	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1234	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R1235	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R1236	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R1237	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1238	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1239	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1240	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1241	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1242	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R1243	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1244	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
RB1201	1-233-576-11	s	RESISTOR,CHIP NETWORK 100
SW1201	1-571-589-11	s	SWITCH,SLIDE (1-1-3)
X1201	1-781-163-11	s	VIBRATOR, OSCILLATOR (24.0MHz)
X1202	1-781-170-11	s	VIBRATOR, CERAMIC (6.0MHz)

QC BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1275-179-A	o	MOUNTED CIRCUIT BOARD, QC
C1801	1-126-204-11	s	CAPACITOR, ELECT 47MF/16V(CHIP
C1802	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1803	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1804	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1805	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1806	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1807	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C1808	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1810	1-163-231-11	s	CAPACITOR,CHIP CERAMIC15PF/50V
C1811	1-163-231-11	s	CAPACITOR,CHIP CERAMIC15PF/50V
CN1801	1-778-830-21	s	CONNECTOR (BUS)
CN1802	1-784-828-11	s	CONNECTOR, D SUB
CN1803	1-784-828-11	s	CONNECTOR, D SUB
CN1804	1-793-797-21	o	CONNECTOR, BOARD TO BOARD
CN1805	1-793-797-21	o	CONNECTOR, BOARD TO BOARD
D1801	8-719-158-15	s	DIODE RD5.6SB
D1802	8-719-058-24	s	DIODE RB501V-40TE17
D1803	8-719-158-15	s	DIODE RD5.6SB
D1804	8-719-158-15	s	DIODE RD5.6SB
D1805	8-719-158-15	s	DIODE RD5.6SB
D1806	8-719-158-15	s	DIODE RD5.6SB
D1807	8-719-158-15	s	DIODE RD5.6SB
D1808	8-719-158-15	s	DIODE RD5.6SB
D1809	8-719-988-61	s	DIODE 1SS355TE-17
D1811	8-719-158-15	s	DIODE RD5.6SB
D1812	8-719-988-61	s	DIODE 1SS355TE-17
D1815	8-719-988-61	s	DIODE 1SS355TE-17
D1816	8-719-158-37	s	DIODE RD9.1SB2
D1817	8-719-158-15	s	DIODE RD5.6SB
D1818	8-719-058-24	s	DIODE RB501V-40TE17
D1819	8-719-158-15	s	DIODE RD5.6SB
D1820	8-719-158-15	s	DIODE RD5.6SB
D1821	8-719-158-15	s	DIODE RD5.6SB
D1822	8-719-158-15	s	DIODE RD5.6SB
D1823	8-719-158-15	s	DIODE RD5.6SB
D1824	8-719-158-15	s	DIODE RD5.6SB
D1825	8-719-158-15	s	DIODE RD5.6SB
D1826	8-719-158-15	s	DIODE RD5.6SB
IC1801	8-759-697-26	s	IC RCV4-A1T-MASK-25
IC1802	8-759-661-55	s	IC ST24FC21M6TR
IC1803	8-759-925-72	s	IC SN74HC02ANS
IC1804	8-759-542-91	s	IC S-80840ANUP-ED4-T2
J1801	1-566-822-21	s	JACK
J1802	1-566-822-21	s	JACK
Q1801	1-801-806-11	s	TRANSISTOR DTC144EAK
Q1802	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q1803	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q1804	8-729-216-22	s	TRANSISTOR 2SA1162-G
R1801	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1802	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1803	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1804	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R1805	1-216-121-00	s	RESISTOR CHIP 1M 1/10W(2012)
R1806	1-216-067-00	s	RESISTOR,CHIP 5.6K 1/10W(2012)
R1807	1-216-063-91	s	RESISTOR,CHIP 3.9K 1/10W(2125)
R1808	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)

(QC BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1809	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1810	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1811	1-216-059-00	s	RESISTOR,CHIP 2.7K 1/10W(2012)
R1812	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R1813	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1814	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1815	1-216-067-00	s	RESISTOR,CHIP 5.6K 1/10W(2012)
R1816	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1817	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1818	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1819	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1820	1-216-083-00	s	RESISTOR CHIP 27K 1/10W(2012)
R1821	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R1822	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1823	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R1824	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1825	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R1826	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1827	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1828	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R1829	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1830	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1831	1-216-053-00	s	RESISTOR CHIP 1.5K 1/10W(2012)
R1832	1-216-121-00	s	RESISTOR CHIP 1M 1/10W(2012)
R1833	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1834	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R1835	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R1836	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R1837	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1838	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1839	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1840	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1841	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R1842	1-216-091-00	s	RESISTOR CHIP 56K 1/10W(2012)
R1843	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
RB1801	1-233-576-11	s	RESISTOR,CHIP NETWORK 100
X1801	1-781-163-11	s	VIBRATOR, OSCILLATOR (24.0MHz)
X1802	1-781-170-11	s	VIBRATOR, CERAMIC (6.0MHz)

QD BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1275-181-A	o	MOUNTED CIRCUIT BOARD, QD
C1901	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1902	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1903	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1904	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1905	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1906	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C1908	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C1909	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C1910	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C1911	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C1912	1-163-009-11	s	CAPACITOR,CERAMIC 1000PF/50V
C1915	1-109-994-11	s	CAPACITOR,CHIP CERAMIC 2.2MF B
C1916	1-124-779-00	s	CAPACITOR,ELECT 10MF/16V
C1917	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C1918	1-109-994-11	s	CAPACITOR,CHIP CERAMIC 2.2MF B
C1919	1-163-133-00	s	CAPACITOR,CHIP CERAMIC 470PF
CN1902	1-573-290-21	s	PIN,CONNECTOR (4P)(SMD)(1.5MM)
CN1903	1-764-177-11	o	PIN,CONNECTOR (7P)(SMD)(1.5MM)
CN1904	1-565-269-11	s	SOCKET,CONNECTOR 9P
D1901	8-719-037-53	s	DIODE RD27SB-T1
D1902	8-719-037-53	s	DIODE RD27SB-T1
D1903	8-719-914-42	s	DIODE DA204K
D1904	8-719-037-53	s	DIODE RD27SB-T1
D1905	8-719-037-53	s	DIODE RD27SB-T1
D1906	8-719-914-42	s	DIODE DA204K
D1907	8-719-914-43	s	DIODE DAN202K
D1908	8-719-914-44	s	DIODE DAP202K (DUAL)
D1909	8-719-158-37	s	DIODE RD9.1SB2
D1910	8-719-158-37	s	DIODE RD9.1SB2
D1911	8-719-158-37	s	DIODE RD9.1SB2
D1912	8-719-158-37	s	DIODE RD9.1SB2
IC1901	8-759-252-59	s	IC MAX202CSE
IC1902	8-759-285-61	s	IC PC74HC123D-T
J1901	1-770-053-11	s	TERMINAL BLOCK, S (FRONT)
J1902	1-695-473-11	s	JACK (EARPHONE)
L1901	1-412-363-11	s	FERRITE, EMI (SMD)
L1902	1-412-363-11	s	FERRITE, EMI (SMD)
L1903	1-412-363-11	s	FERRITE, EMI (SMD)
Q1901	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q1902	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q1903	1-801-806-11	s	TRANSISTOR DTC144EAK
Q1904	1-801-806-11	s	TRANSISTOR DTC144EAK
R1901	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1902	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1903	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1904	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R1914	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1915	1-216-148-00	s	RESISTOR,CHIP 8.2 1/8W(3216)
R1916	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R1917	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R1918	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R1919	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R1920	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R1921	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)

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(QD BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1922	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R1923	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1924	1-216-308-00	s	RESISTOR,CHIP 4.7 1/10W(2012)
R1925	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R1926	1-216-113-00	s	RESISTOR CHIP 470K 1/10W(2012)
RB1901	1-233-576-11	s	RESISTOR,CHIP NETWORK 100
TP1901	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP1902	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)

S BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1390-975-A	o	MOUNTED CIRCUIT BOARD, S
CN2020	1-580-056-21	o	PIN,CONNECTOR 3P
S2020	1-570-245-11	s	SWITCH,MICRO
TH2020	1-808-656-11	s	THERMISTOR

Y BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1395-021-A	o	MOUNTED CIRCUIT BOARD, Y [for VPL-PX31]
1pc	A-1395-022-A	o	MOUNTED CIRCUIT BOARD, Y [for VPL-PX21]
2pcs	4-073-897-01	o	GUIDE, PWB
C3001	1-109-982-11	s	CAPACITOR,CHIP CERAMIC 1MF/10V
C3006	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3007	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3008	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C3009	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C3012	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3013	1-126-395-11	s	CAPACITOR,ELECT 22MF/16V(CHIP)
C3014	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C3200	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3202	1-109-982-11	s	CAPACITOR,CHIP CERAMIC 1MF/10V
C3203	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3204	1-109-982-11	s	CAPACITOR,CHIP CERAMIC 1MF/10V
C3205	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3206	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3207	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3208	1-163-133-00	s	CAPACITOR,CHIP CERAMIC 470PF
C3209	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
C3210	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
C3211	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C3212	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3213	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C3214	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3215	1-124-778-00	s	CAPACITOR,ELECT 22MF/6.3V
C3216	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3217	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3218	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3219	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3220	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3301	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3302	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3303	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3304	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3305	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3306	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3307	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3308	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3309	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C3310	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C3311	1-126-205-11	s	CAPACITOR,ELECT 47M/6.3
C3312	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3313	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3314	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3315	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3316	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3317	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3318	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3319	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
C3320	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
C3321	1-163-239-11	s	CAPACITOR,CHIP CERAMIC33PF/50V
C3322	1-163-239-11	s	CAPACITOR,CHIP CERAMIC33PF/50V
C3323	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3324	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3325	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3326	1-109-982-11	s	CAPACITOR,CHIP CERAMIC 1MF/10V

(Y BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C3327	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3328	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3330	1-163-021-91	s	CAPACITOR, CERAMIC 0.01MF/50V
C3332	1-117-720-11	s	CAPACITOR, CERAMIC 4.7MF/10V F
C3334	1-117-720-11	s	CAPACITOR, CERAMIC 4.7MF/10V F
C3401	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C3402	1-125-817-11	s	CAPACITOR, CERAMIC 10MF/6.3V
C3403	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
CN3000	1-785-305-21	o	CONNECTOR, BOARD TO BOARD
CN3001	1-764-007-11	o	PIN, CONNECTOR (SMD) 12P
CN3002	1-580-057-11	o	PIN,CONNECTOR 4P
CN3003	1-580-756-21	o	PIN, CONNECTOR 7P
CN3005	1-760-388-11	o	CONNECTOR PIN (SMD) 9 PIN
CN3010	1-691-551-11	o	PIN, CONNECTOR (SMD) 8P
D3200	8-719-914-43	s	DIODE DAN202K
D3201	8-719-914-43	s	DIODE DAN202K
D3301	8-719-158-19	s	DIODE RD6.2SB
D3302	8-719-158-19	s	DIODE RD6.2SB
D3303	8-719-158-19	s	DIODE RD6.2SB
D3304	8-719-158-19	s	DIODE RD6.2SB
D3305	8-719-158-19	s	DIODE RD6.2SB
D3306	8-719-158-19	s	DIODE RD6.2SB
D3307	8-719-158-19	s	DIODE RD6.2SB
D3308	8-719-158-19	s	DIODE RD6.2SB
D3309	8-719-158-19	s	DIODE RD6.2SB
D3310	8-719-158-19	s	DIODE RD6.2SB
D3311	8-719-158-19	s	DIODE RD6.2SB
D3312	8-719-158-19	s	DIODE RD6.2SB
D3313	8-719-158-19	s	DIODE RD6.2SB
D3314	8-719-158-19	s	DIODE RD6.2SB
D3315	8-719-158-19	s	DIODE RD6.2SB
D3316	8-719-158-19	s	DIODE RD6.2SB
D3317	8-719-914-43	s	DIODE DAN202K
D3318	8-719-914-43	s	DIODE DAN202K
FB3200	1-414-234-11	s	INDUCTOR,FERRITE BEAD
FB3201	1-414-234-11	s	INDUCTOR,FERRITE BEAD
FL3000	1-239-899-21	s	FILTER, CHIP EMI
FL3001	1-239-899-21	s	FILTER, CHIP EMI
FL3002	1-239-899-21	s	FILTER, CHIP EMI
IC3002	8-759-082-58	s	IC TC7W08FU
IC3003	8-759-058-58	s	IC TC7S04FU-TE85R
IC3004	8-759-460-72	s	IC BA033FP
IC3007	8-759-157-17	s	IC PQ05SZ1U
IC3200	8-759-082-58	s	IC TC7W08FU
IC3201	8-759-582-91	s	IC S-80842ANNP-ED6-T2
IC3202	8-759-544-01	s	IC S-80828ANNP-EDR-T2
IC3203	8-759-684-72	o	IC M24C64-WMN6T(A)
IC3204	8-759-648-10	s	IC HD64F2633TE
IC3301	8-759-681-47	s	IC IRMF-A0T-QTP
IC3302	8-759-242-78	s	IC TC7W02F
IC3303	8-759-655-55	s	IC UPD72012GB-003-3B4
IC3304	8-759-713-00	s	IC ST72T631K4M1-XX
IC3401	8-759-082-60	s	IC TC7S66FU
IC3402	8-759-277-63	s	IC TC7W14FU (TE12R)
Q3000	8-729-202-38	s	TRANSISTOR 2SC3326N-A
Q3001	8-729-202-38	s	TRANSISTOR 2SC3326N-A
Q3002	8-729-230-49	s	TRANSISTOR 2SC2712-YG

(Y BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q3003	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q3200	8-729-101-07	s	TRANSISTOR 2SB798
Q3201	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q3301	8-729-202-38	s	TRANSISTOR 2SC3326N-A
Q3302	8-729-202-38	s	TRANSISTOR 2SC3326N-A
Q3303	8-729-230-49	s	TRANSISTOR 2SC2712-YG
Q3306	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q3307	1-801-806-11	s	TRANSISTOR DTC144EAK
Q3310	1-801-806-11	s	TRANSISTOR DTC144EAK
R3002	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3004	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3005	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R3007	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3008	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3009	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R3012	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3014	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3015	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3016	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3017	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R3019	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3020	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3021	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R3030	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R3031	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3032	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3033	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R3201	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3202	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R3203	1-216-085-00	s	RESISTOR CHIP 33K 1/10W(2012)
R3204	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R3205	1-216-089-00	s	RESISTOR CHIP 47K 1/10W(2012)
R3206	1-216-634-11	s	RESISTOR,CHIP 200 1/10W(2012)
R3207	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3208	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3211	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3212	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3213	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3214	1-216-662-11	s	RESISTOR,CHIP 3K 1/10W (2012)
R3215	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3216	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3217	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3220	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3221	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3222	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3223	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3224	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R3227	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3228	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3231	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3232	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3234	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3235	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R3237	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3239	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3243	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3245	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3246	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3247	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)

(Y BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R3248	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3249	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3250	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3251	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3252	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3253	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3254	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3255	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3256	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3257	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3258	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3259	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3260	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3261	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3262	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3263	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3264	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3265	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3267	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3268	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3271	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3274	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3275	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3276	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R3277	1-216-661-11	s	RESISTOR,CHIP 2.7K 1/10W(2012)
R3301	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R3302	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R3303	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R3304	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R3305	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R3306	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R3307	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3308	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3309	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R3310	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3311	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R3312	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3313	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3314	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3315	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R3316	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R3317	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3318	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3319	1-216-017-91	s	RESISTOR, CHIP 47 1/10W(2012)
R3320	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3321	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3322	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3323	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3324	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3325	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3326	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3327	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3328	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3329	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3330	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3331	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3332	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3333	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3334	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)

(Y BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R3335	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3336	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3337	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3338	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3339	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3340	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3341	1-216-001-00	s	RESISTOR, CHIP 10 1/10W(2012)
R3342	1-216-067-00	s	RESISTOR,CHIP 5.6K 1/10W(2012)
R3343	1-216-121-00	s	RESISTOR CHIP 1M 1/10W(2012)
R3344	1-216-053-00	s	RESISTOR CHIP 1.5K 1/10W(2012)
R3345	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3346	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3347	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3348	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3349	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3350	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3351	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3352	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3353	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3354	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3355	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3356	1-216-005-00	s	RESISTOR,CHIP 15 1/10W(2012)
R3357	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R3358	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R3359	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R3360	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R3361	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R3362	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R3363	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3364	1-216-662-11	s	RESISTOR,CHIP 3K 1/10W (2012)
R3365	1-218-769-11	s	RESISTOR,CHIP 510K 1/10W)2012)
R3366	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R3367	1-216-097-00	s	RESISTOR CHIP 100K 1/10W(2012)
R3368	1-218-769-11	s	RESISTOR,CHIP 510K 1/10W)2012)
R3369	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R3370	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3371	1-216-053-00	s	RESISTOR CHIP 1.5K 1/10W(2012)
R3372	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3378	1-216-662-11	s	RESISTOR,CHIP 3K 1/10W (2012)
R3382	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R3383	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R3384	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3386	1-216-057-00	s	RESISTOR CHIP 2.2K 1/10W(2012)
R3389	1-216-049-11	s	RESISTOR, CHIP 1K 1/10W(2012)
R3390	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3401	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R3402	1-216-295-00	s	CONDUCTOR, CHIP (2012)
R3403	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3404	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R3405	1-216-103-00	s	RESISTOR,CHIP 180K 1/10W(2012)
R3406	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R3407	1-216-065-91	s	RESISTOR,CHIP 4.7K 1/10W(2012) [for VPL-PX21]
R3408	1-216-067-91	s	RESISTOR,CHIP 5.6K 1/10W(2012) [for VPL-PX31]
RB3003	1-233-576-11	s	RESISTOR,CHIP NETWORK 100
TP3000	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3001	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)

(Y BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
TP3002	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3003	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3004	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3005	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3006	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3007	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3008	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3009	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3200	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3201	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3202	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3203	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3204	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3205	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3206	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3301	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3302	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3303	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3304	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3305	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3306	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3307	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3308	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP3309	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
X3200	1-781-659-11	s	VIBRATOR, CRYSTAL (12.288MHz)
X3301	1-767-340-11	s	VIBRATOR, CRYSTAL (4.0MHz)
X3302	1-781-163-11	s	VIBRATOR, OSCILLATOR (24.0MHz)

6-4. Parts List for Frame

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
2pcs	1-529-499-11	s	SPEAKER (4.5CM)
1pc	⚠ 1-468-445-31	s	POWER BLOCK
2pcs	1-500-278-11	s	FILTER, CLAMP (FERRITE CORE)
1pc	1-505-600-11	s	SPEAKER (065W004)
1pc	1-763-417-11	s	FAN, DC
1pc	1-900-249-68	s	CONNECTOR ASSY, FUSE 2P
1pc	1-763-422-11	s	FAN, DC
1pc	1-758-556-11	s	OPTICAL UNIT [for VPL-PX31]
1pc	1-758-557-11	s	OPTICAL UNIT [for VPL-PX21]

6-5. Packing Materials

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PACKING MATERIALS & SUPPLIED ACCESSORIES
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 Ref. No.
 or Q'ty  Part No.    SP Description

 1pc    ⚠ 1-534-827-14 s CORD, POWER (10A/125V)(For UC)
 1pc      1-751-271-12 s CORD, CONNECTION (PIN/AV)
 1pc    ⚠ 1-777-649-11 s CORD, POWER (10A/250V)
                         (For Continental Europe)
 1pc    ⚠ 1-782-929-11 s CORD POWER SUPPLY(BS-3P)(10A/250V)
                         (For UK,Ireland,Australia,Newzealand)
 1pc    ⚠ 1-783-795-51 s CORD, POWER(7A/125V)(For J)

 1pc      1-790-081-11 s CABLE, USB
 1pc      1-791-992-11 s CABLE ASSY(15PDSUBCONNECTORX2)
 1pc      1-791-992-21 s CABLE ASSY (15P D SUBX2)
 1pc      4-073-737-01 s FILTER    (PUR-FM)(98.5X83)
 1pc      4-080-133-01 s CARD (QUICK REFERENCE CARD)
                         (JAPANESE,ENGLISH,FRENCH,SPANISH,
                          GERMAN,ITALIAN,SIMPLIFIED CHINESE)

 1pc      4-080-134-01 s MANUAL, INSTRUCTIONS
                         (JAPANESE, SIMPLIFIED CHINESE)
 1pc      4-080-134-11 s MANUAL, INSTRUCTIONS
                         (ENGLISH, FRENCH, SPANISH)
 1pc      4-080-134-21 s MANUAL, INSTRUCTIONS
                         (GERMAN, ITALIAN)
 1pc      4-080-135-01 s INSTRUCTION MANUAL FOR DEALERS
                         (JAPANESE,ENGLISH,FRENCH,SPANISH,
                          GERMAN,ITALIAN,SIMPLIFIED CHINESE)
 1pc      9-885-000-17 s COVER, BATTERY(FOR RM-PJM610)
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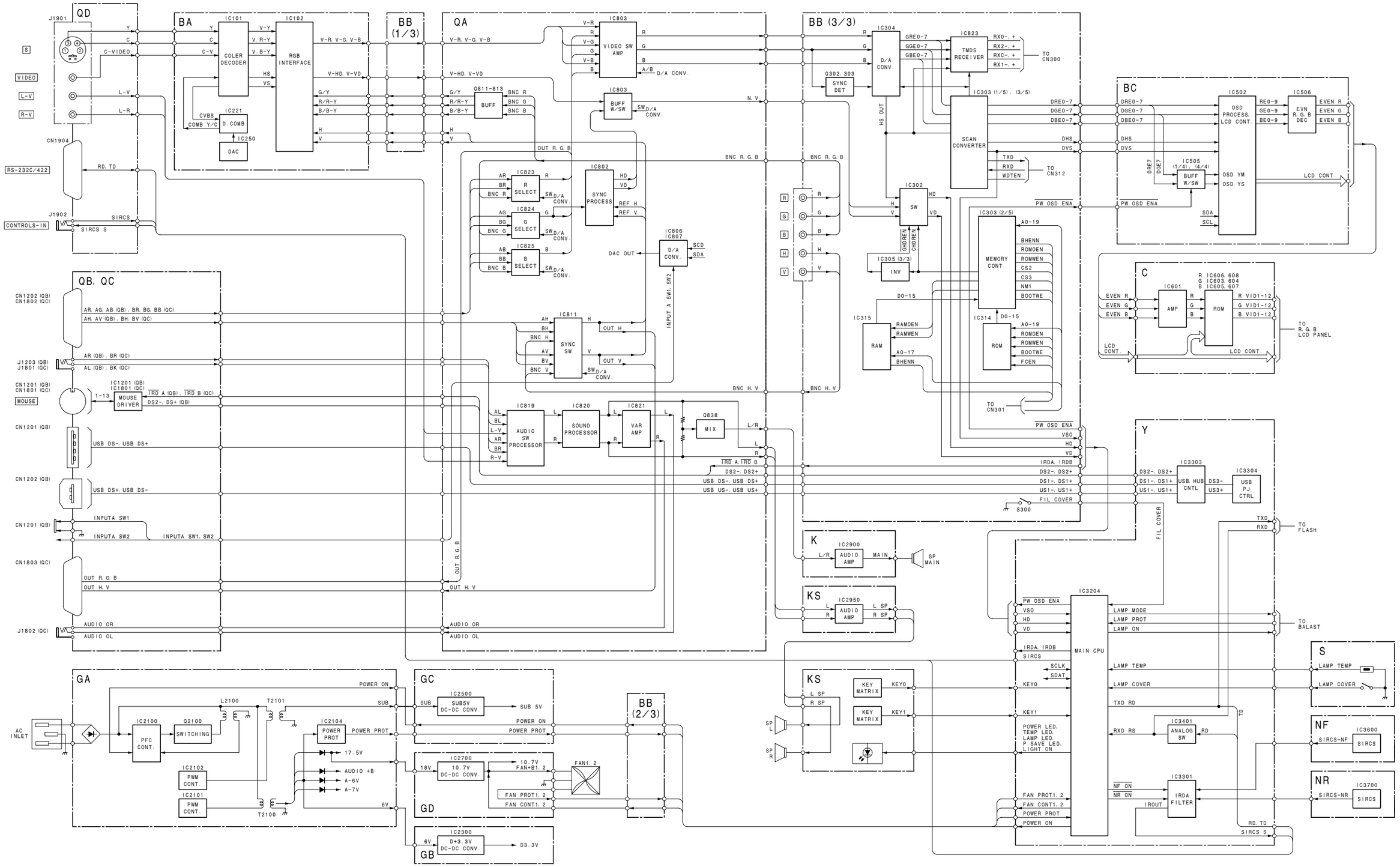
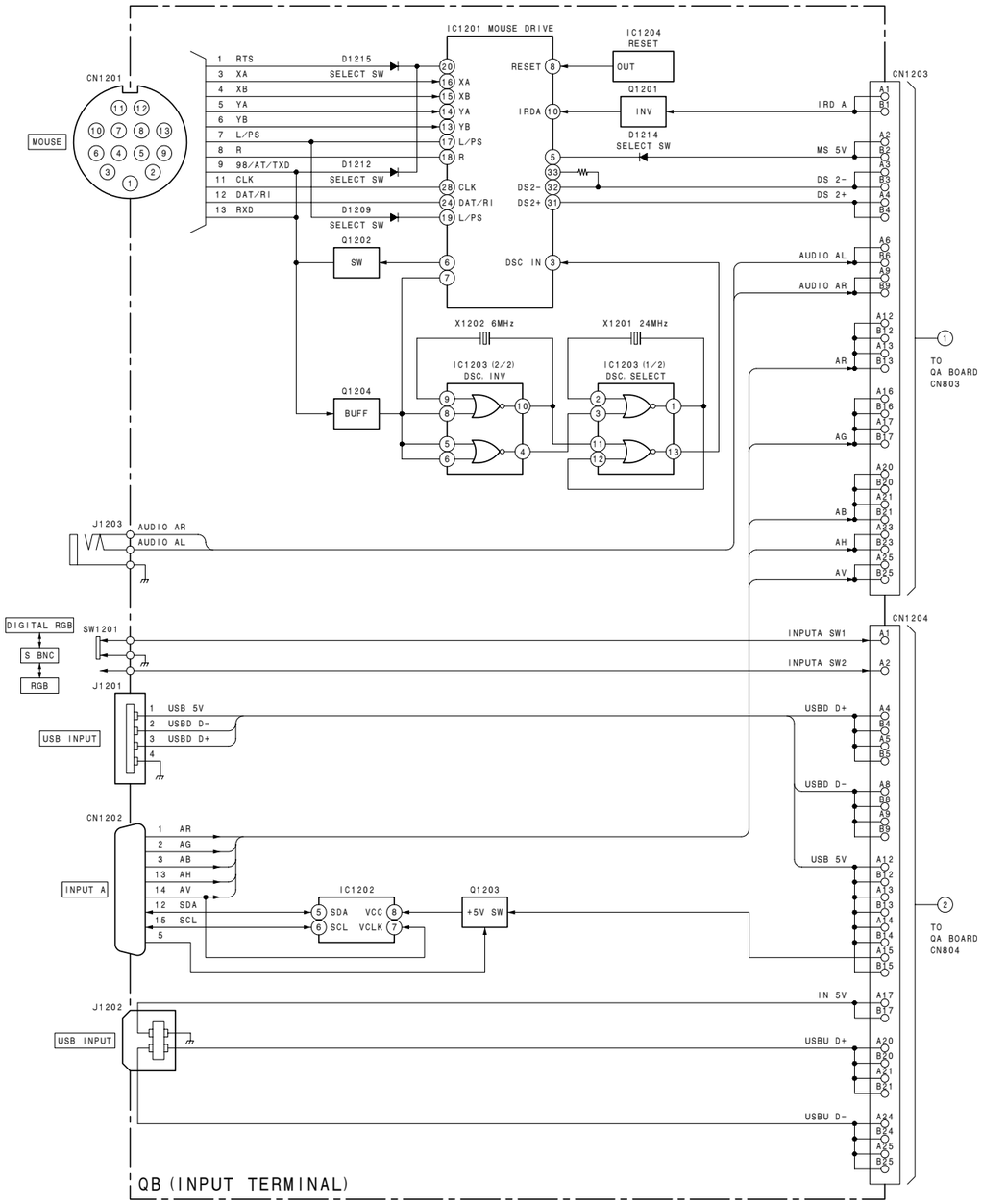
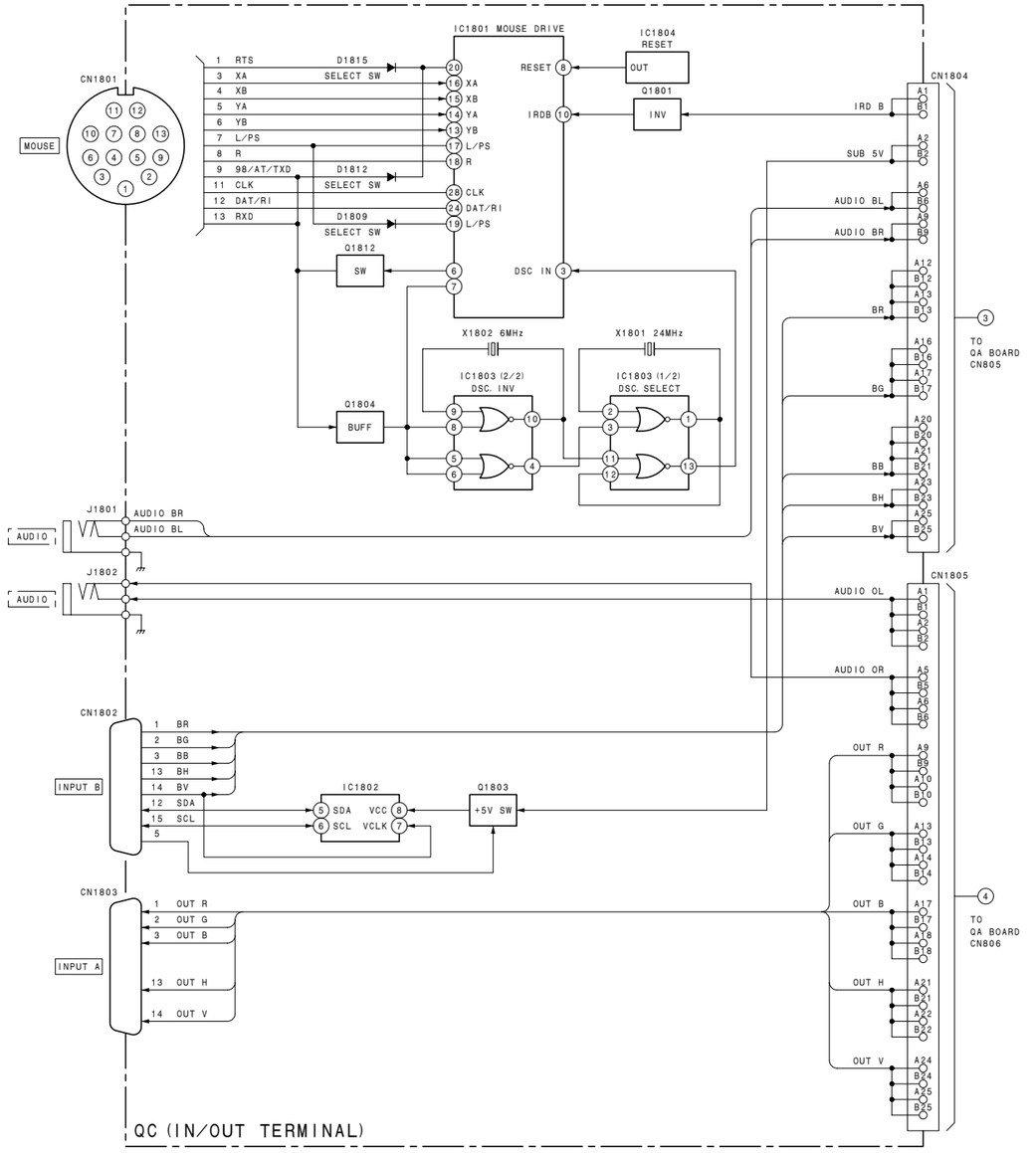
Section 7
Block Diagrams



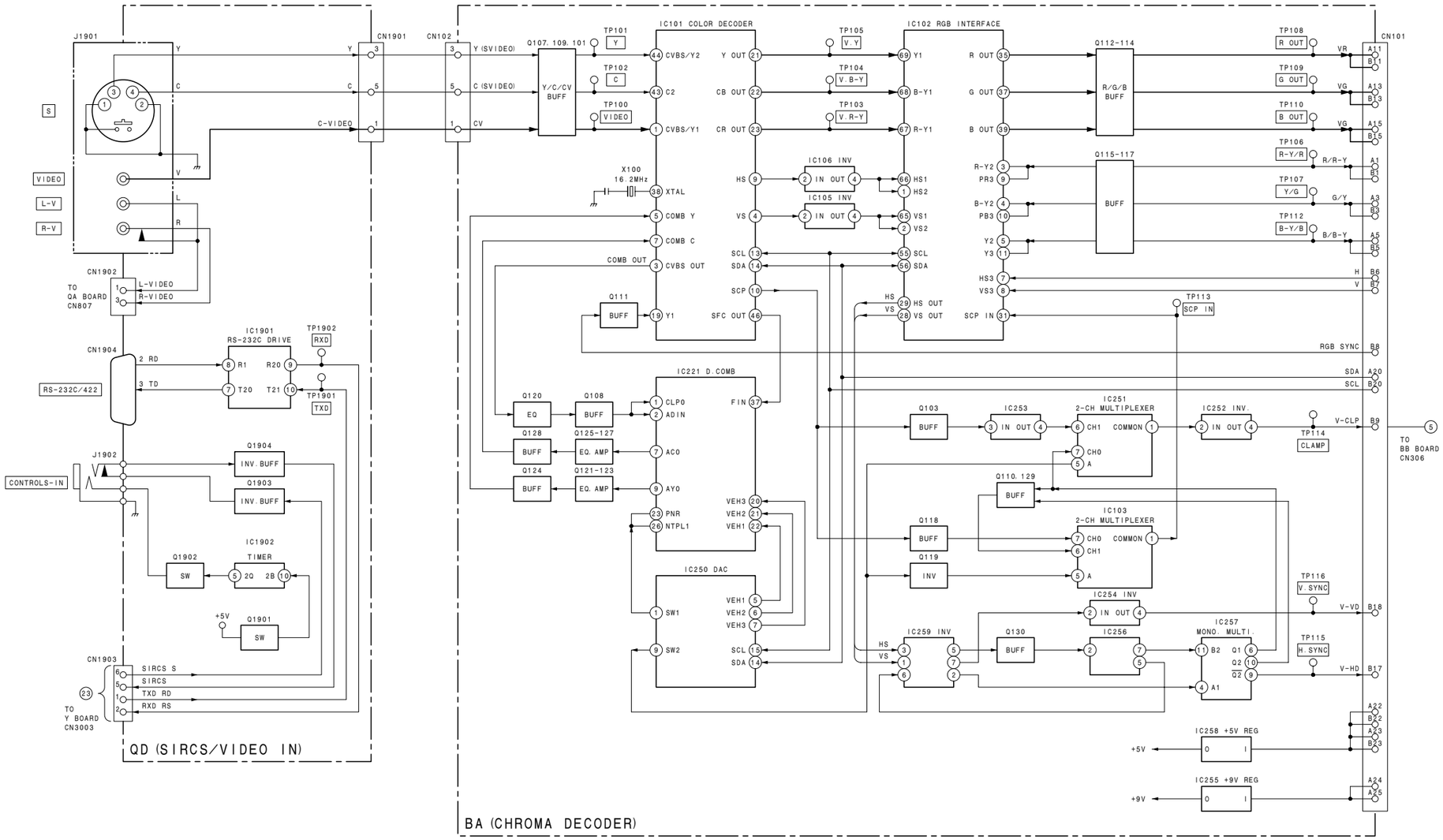
OVERALL BLOCK



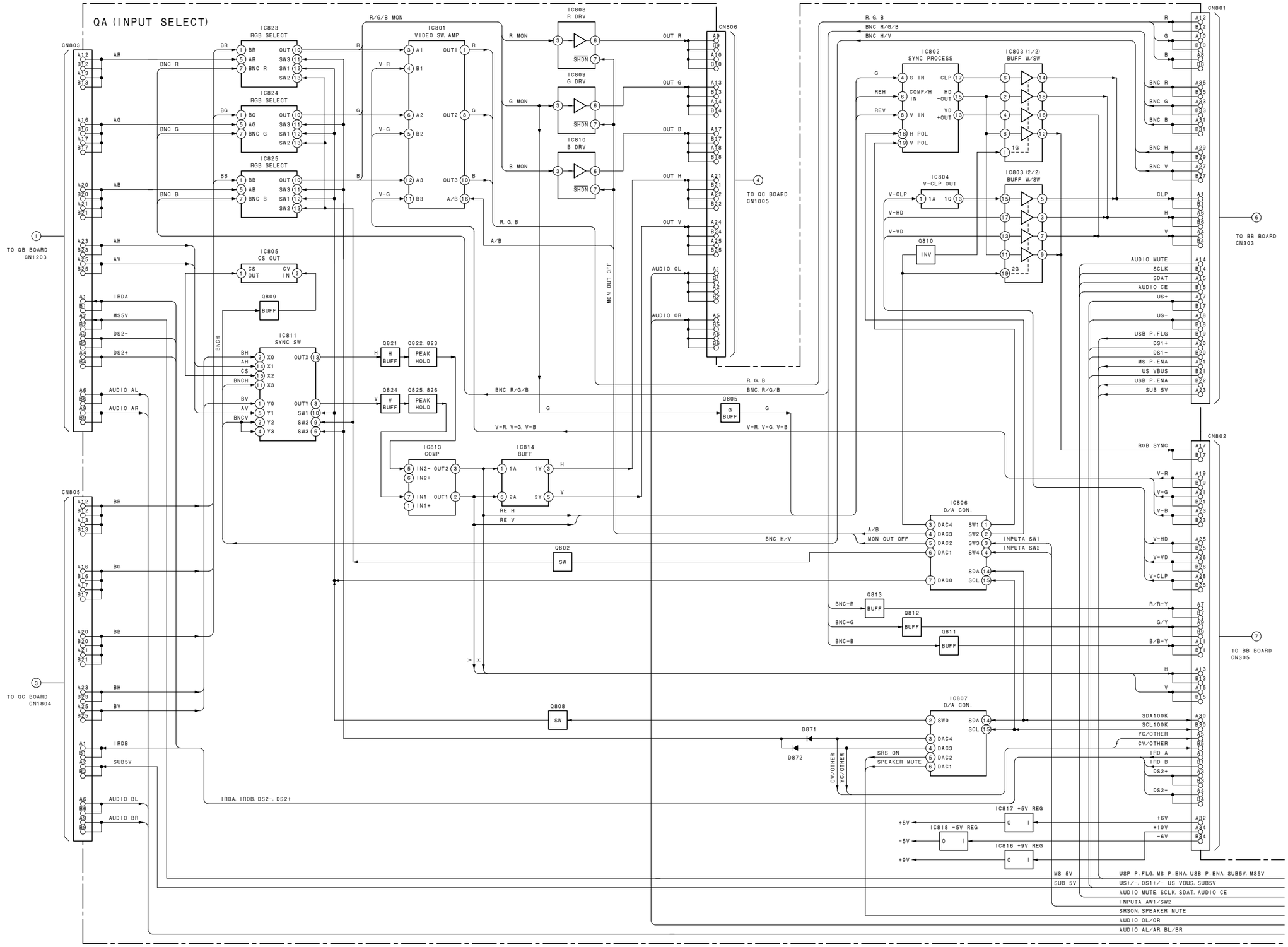


QB BLOCK

QC BLOCK


J1901
S
VIDEO
L-V
R-V
Y
C
V
L
R
CN1902
TO QA BOARD CN807
L-VIDEO
R-VIDEO
CN1904
RS-232C/422
2 RD
3 TD
IC1901
RS-232C DRIVE
R1
T20
R20
T21
TP1902
RXD
TP1901
TXD
J1902
CONTROLS-IN
Q1904
INV. BUFF
Q1903
INV. BUFF
IC1902
TIMER
Q1902
SW
2Q
2B
Q1901
SW
+5V
CN1903
SIRCS S
SIRCS
TXD RD
RXD RS
TO Y BOARD CN3003
QD (SIRCS/VIDEO IN)
CN1901
CN102
Y (SVIDEO)
C (SVIDEO)
CV
Q107, 109, 101
Y/C/CV BUFF
TP101
Y
TP102
C
TP100
VIDEO
IC101 COLOR DECODER
CVBS/Y2
C2
CVBS/Y1
X100
16.2MHz
XTAL
COMB Y
COMB C
COMB OUT
CVBS OUT
Q111
BUFF
Y1
Y OUT
CB OUT
CR OUT
HS
VS
SCL
SDA
SCP
SFC OUT
TP105
V_Y
TP104
V_B-Y
TP103
V_R-Y
IC106 INV
IC105 INV
IN OUT
IC102 RGB INTERFACE
HS1
HS2
VS1
VS2
HS OUT
VS OUT
R OUT
G OUT
B OUT
R-Y2
PR3
B-Y2
PB3
Y2
Y3
HS3
VS3
SCP IN
Q112-114
R/G/B BUFF
Q115-117
BUFF
TP113
SCP IN
TP108
R OUT
TP109
G OUT
TP110
B OUT
TP106
R-Y/R
TP107
Y/G
TP112
B-Y/B
CN101
VR
VG
VG
R/R-Y
G/Y
B/B-Y
H
V
RGB SYNC
SDA
SCL
IC221 D.COMB
CLPO
ADIN
ACO
AYO
PNR
NTPL1
FIN
Q120
EQ
Q108
BUFF
Q128
BUFF
Q125-127
EQ. AMP
Q124
BUFF
Q121-123
EQ. AMP
VEH3
VEH2
VEH1
IC250 DAC
SW1
SW2
Q103
BUFF
IC253
IC251
2-CH MULTIPLEXER
CH1
CH0
A
COMMON
IC252 INV
TP114
CLAMP
V-CLP
TO BB BOARD CN306
Q110, 129
BUFF
Q118
BUFF
Q119
INV
IC103
2-CH MULTIPLEXER
IC254 INV
TP116
V. SYNC
V-VD
IC259 INV
Q130
BUFF
IC256
IC257
MONO. MULTI
B2
Q1
Q2
TP115
H. SYNC
V-HD
IC258 +5V REG
+5V
IC255 +9V REG
+9V
BA (CHROMA DECODER)

BA, QD BLOCK


QA (INPUT SELECT)
CN803
CN805
CN801
CN802
CN806
TO QB BOARD CN1203
TO QC BOARD CN1804
TO QC BOARD CN1805
TO BB BOARD CN303
TO BB BOARD CN305
IC823 RGB SELECT
IC824 RGB SELECT
IC825 RGB SELECT
IC801 VIDEO SW. AMP
IC805 CS OUT
IC811 SYNC SW
IC813 COMP
IC814 BUFF
IC808 R DRV
IC809 G DRV
IC810 B DRV
IC802 SYNC PROCESS
IC803 (1/2) BUFF W/SW
IC803 (2/2) BUFF W/SW
IC804 V-CLP OUT
IC806 D/A CON.
IC807 D/A CON.
Q809 BUFF
Q810 INV
Q811 BUFF
Q812 BUFF
Q813 BUFF
Q802 SW
Q808 SW
Q821 H BUFF
Q822. 823 PEAK HOLD
Q824 V BUFF
Q825. 826 PEAK HOLD
Q805 G BUFF
D871
D872
IC817 +5V REG
IC818 -5V REG
IC816 +9V REG
R/G/B MON
MON OUT OFF
BNCH
BNC R/G/B
BNC H/V
R. G. B
A/B
RE H
RE V
INPUTA SW1
INPUTA SW2
SRS ON
SPEAKER MUTE
MS 5V
SUB 5V
IRDA. IRDB. DS2-. DS2+
USP P.FLG. MS P.ENA. USB P.ENA. SUB5V. MS5V
US+/-. DS1+/- US VBUS. SUB5V
AUDIO MUTE. SCLK. SDAT. AUDIO CE
INPUTA AW1/SW2
SRSON. SPEAKER MUTE
AUDIO OL/OR
AUDIO AL/AR. BL/BR

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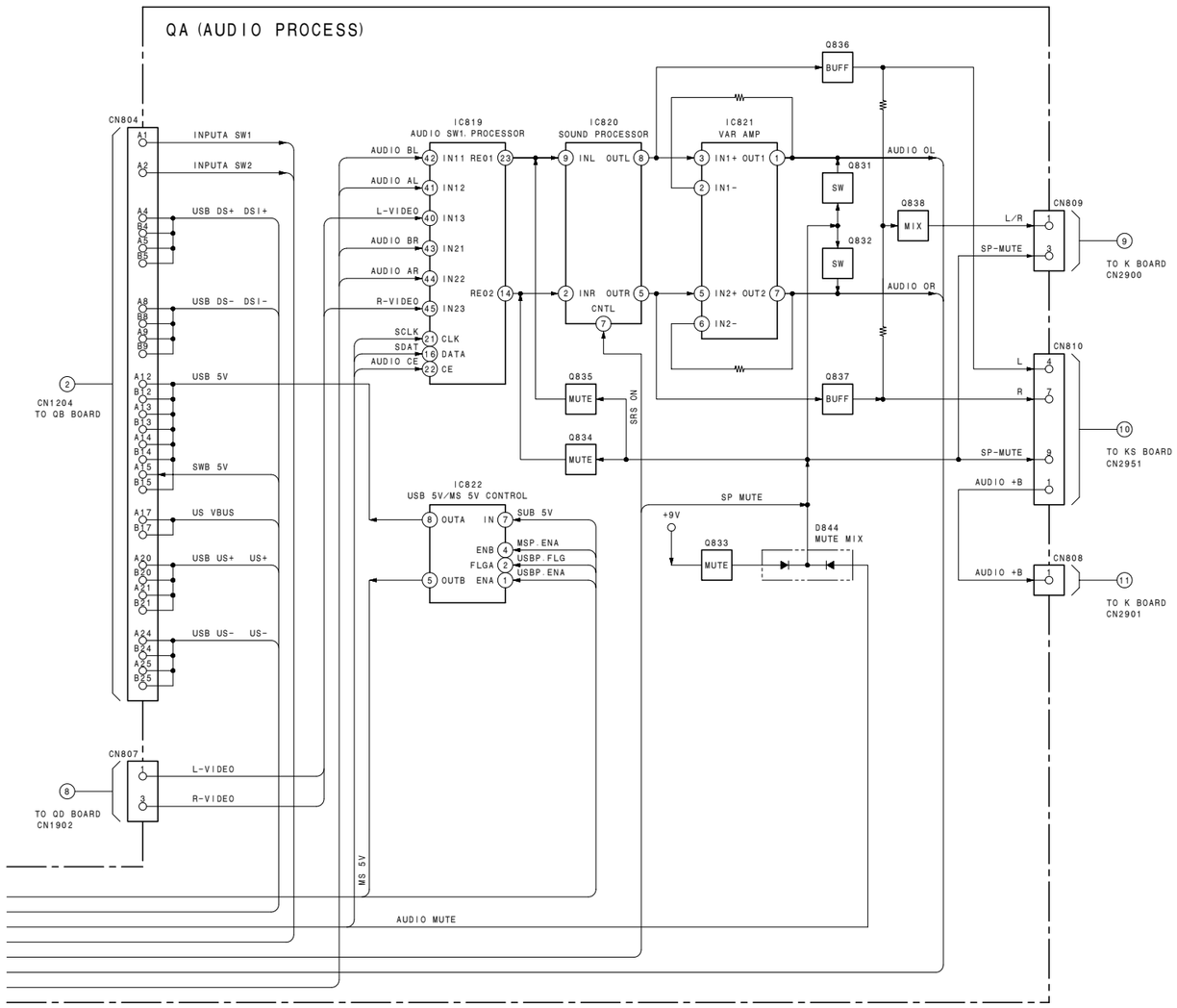
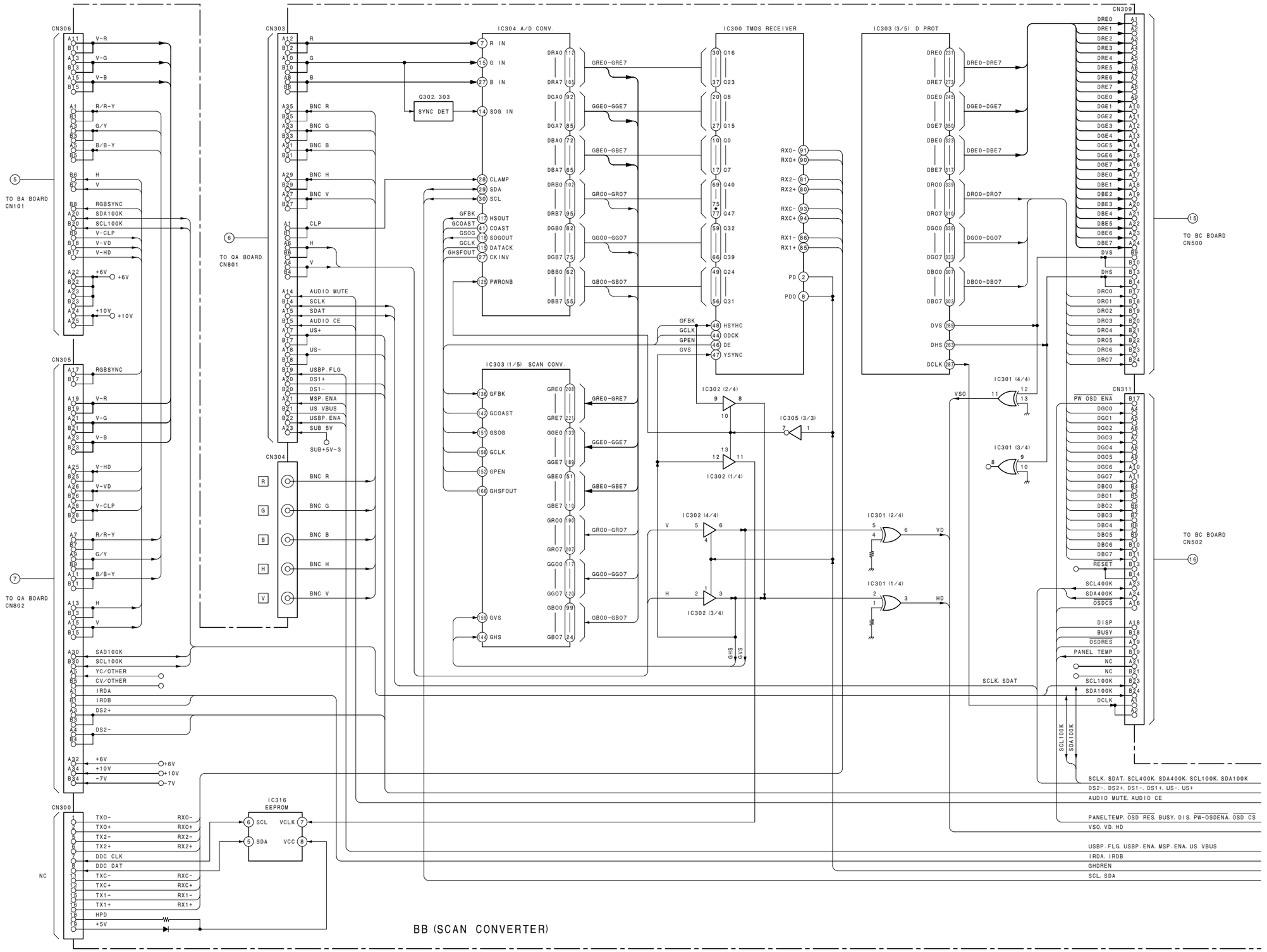
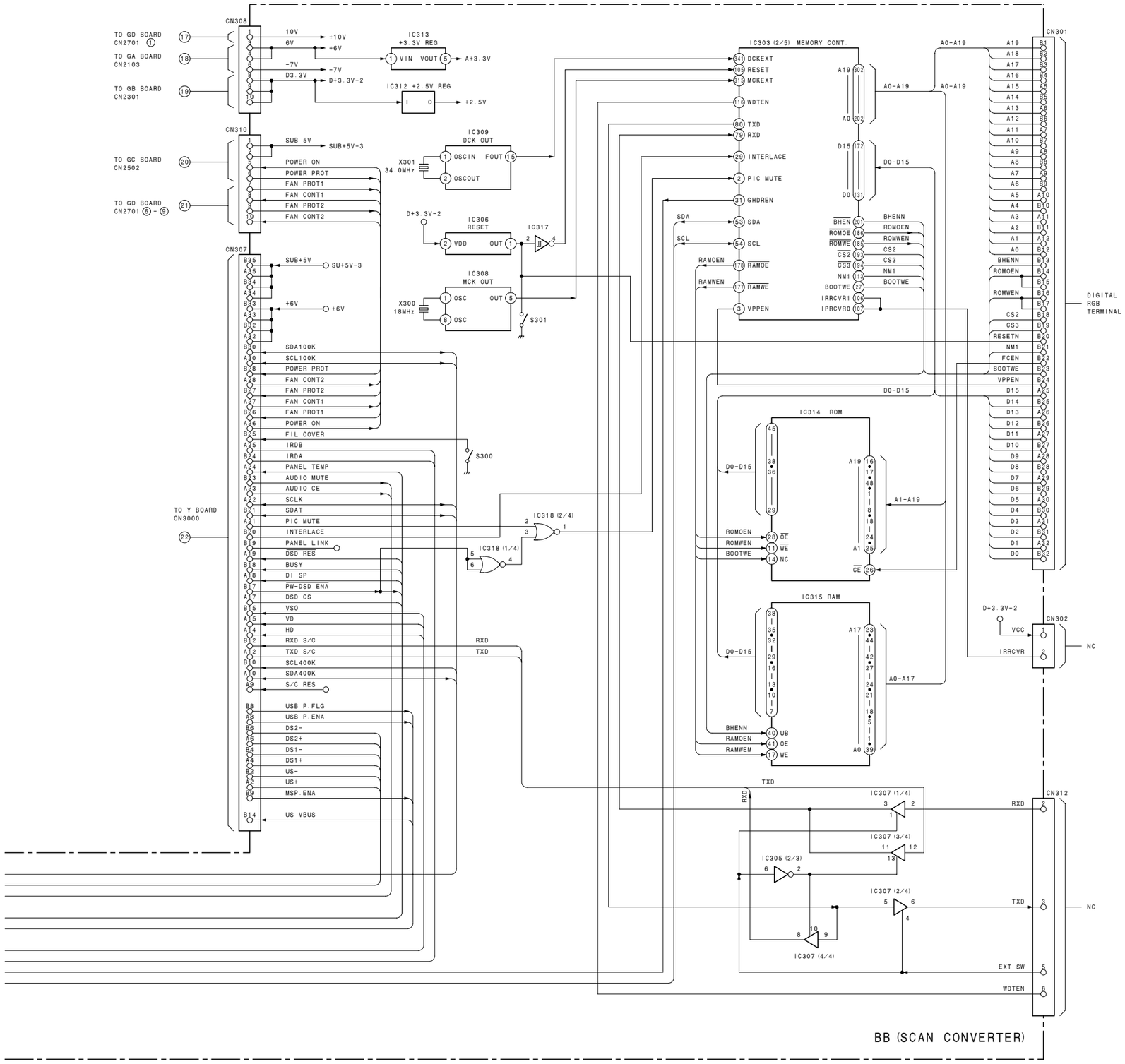


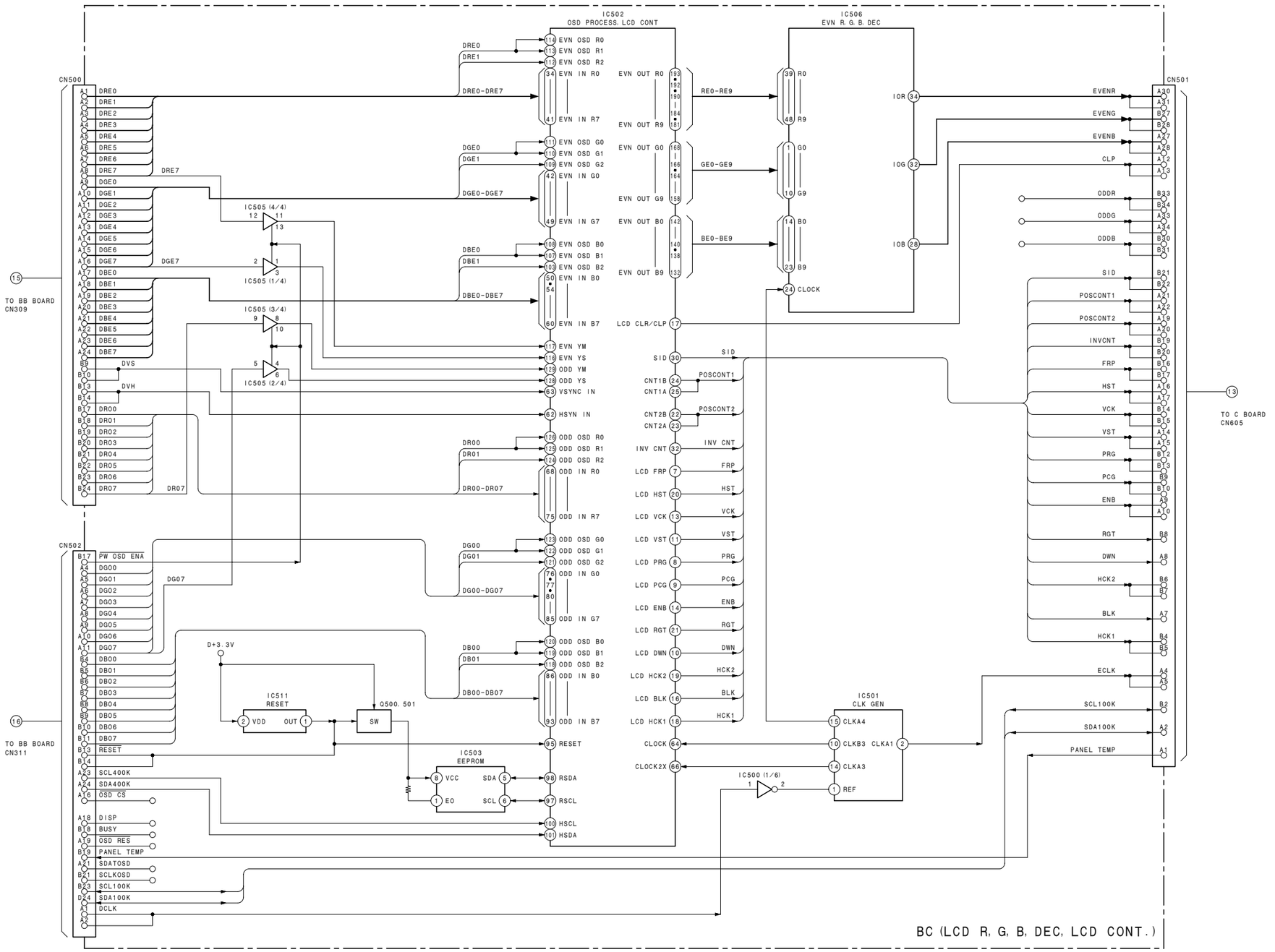
QA BLOCK



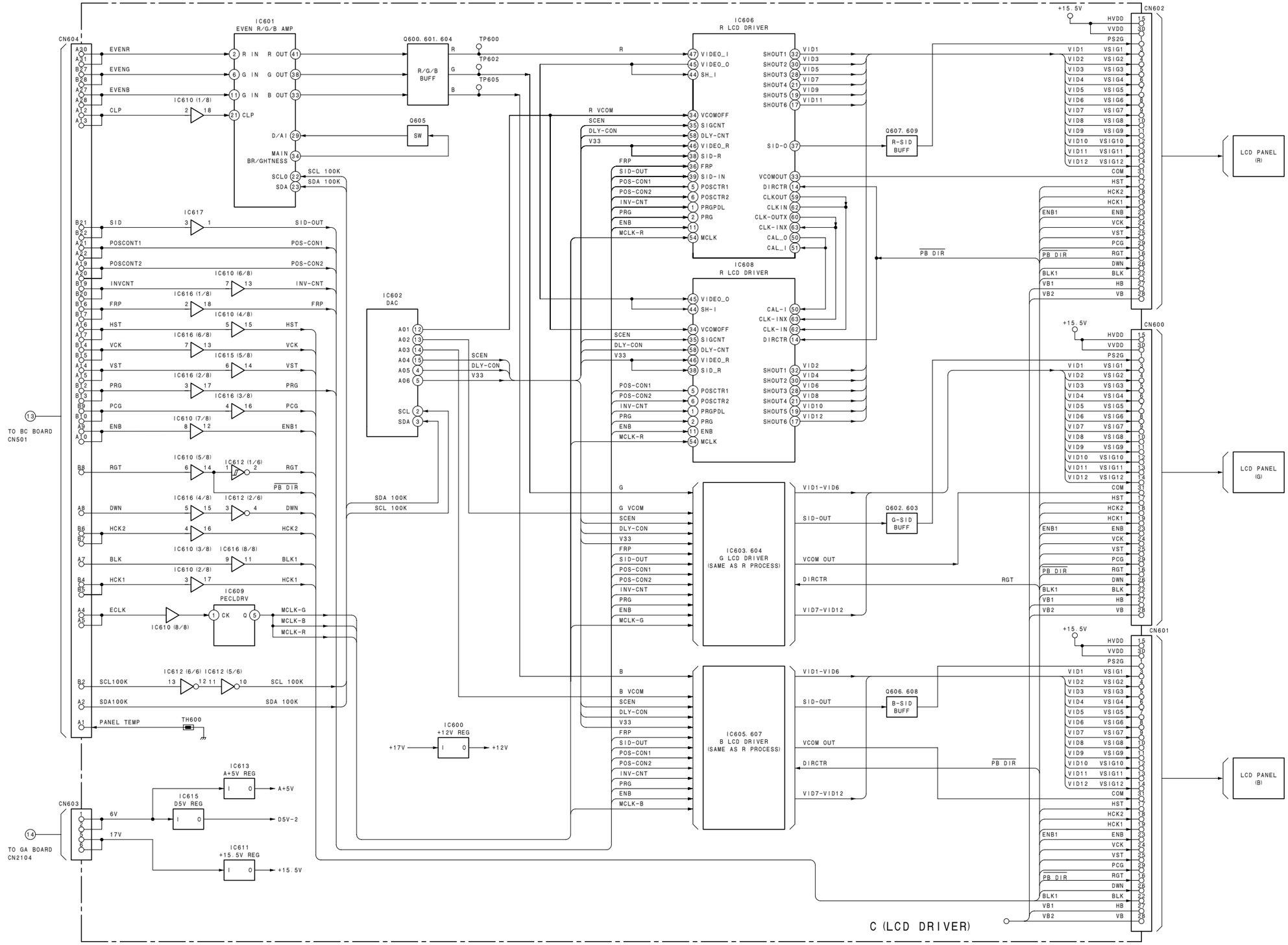
BB (SCAN CONVERTER)


CN308
TO GD BOARD CN2701 (17)
TO GA BOARD CN2103 (18)
TO GB BOARD CN2301 (19)
10V
6V
-7V
D3.3V
+10V
+6V
-7V
D+3.3V-2
IC313 +3.3V REG
VIN VOUT
A+3.3V
IC312 +2.5V REG
+2.5V
CN310
TO GC BOARD CN2502 (20)
TO GD BOARD CN2701 (6)-(9) (21)
SUB 5V
SUB+5V-3
POWER ON
POWER PROT
FAN PROT1
FAN CONT1
FAN PROT2
FAN CONT2
IC309 DCK OUT
X301 34.0MHz
OSCIN FOUT
OSCOUT
IC306 RESET
VDD OUT
IC317
IC308 MCK OUT
X300 18MHz
OSC OUT
S301
CN307
SUB+5V
SU+5V-3
+6V
SDA100K
SCL100K
POWER PROT
FAN CONT2
FAN PROT2
FAN CONT1
FAN PROT1
POWER ON
FIL COVER
IRDB
IRDA
PANEL TEMP
AUDIO MUTE
AUDIO CE
SCLK
SDAT
PIC MUTE
INTERLACE
PANEL LINK
DSD RES
BUSY
DI SP
PW-DSD ENA
DSD CS
VSO
VD
HD
RXD S/C
TXD S/C
SCL400K
SDA400K
S/C RES
USB P.FLG
USB P.ENA
DS2-
DS2+
DS1-
DS1+
US-
US+
MSP ENA
US VBUS
S300
TO Y BOARD CN3000 (22)
IC318 (2/4)
IC318 (1/4)
RXD
TXD
IC303 (2/5) MEMORY CONT.
DCKEXT
RESET
MCKEXT
WDTEN
TXD
RXD
INTERLACE
PIC MUTE
GHDREN
SDA
SCL
RAMOEN
RAMWE
VPPEN
A19
A0
D15
D0
A0-A19
D0-D15
BHEN
ROMOE
ROMWE
CS2
CS3
NM1
BOOTWE
IRRCVR1
IRPCVR0
BHENN
ROMOEN
ROMWEN
IC314 ROM
OE
WE
NC
A1-A19
CE
IC315 RAM
UB
OE
WE
A17
A0-A17
CN301
DIGITAL RGB TERMINAL
RESETN
FCEN
CN302
VCC
IRRCVR
NC
CN312
IC307 (1/4)
IC307 (3/4)
IC307 (2/4)
IC307 (4/4)
IC305 (2/3)
EXT SW
WDTEN
BB (SCAN CONVERTER)

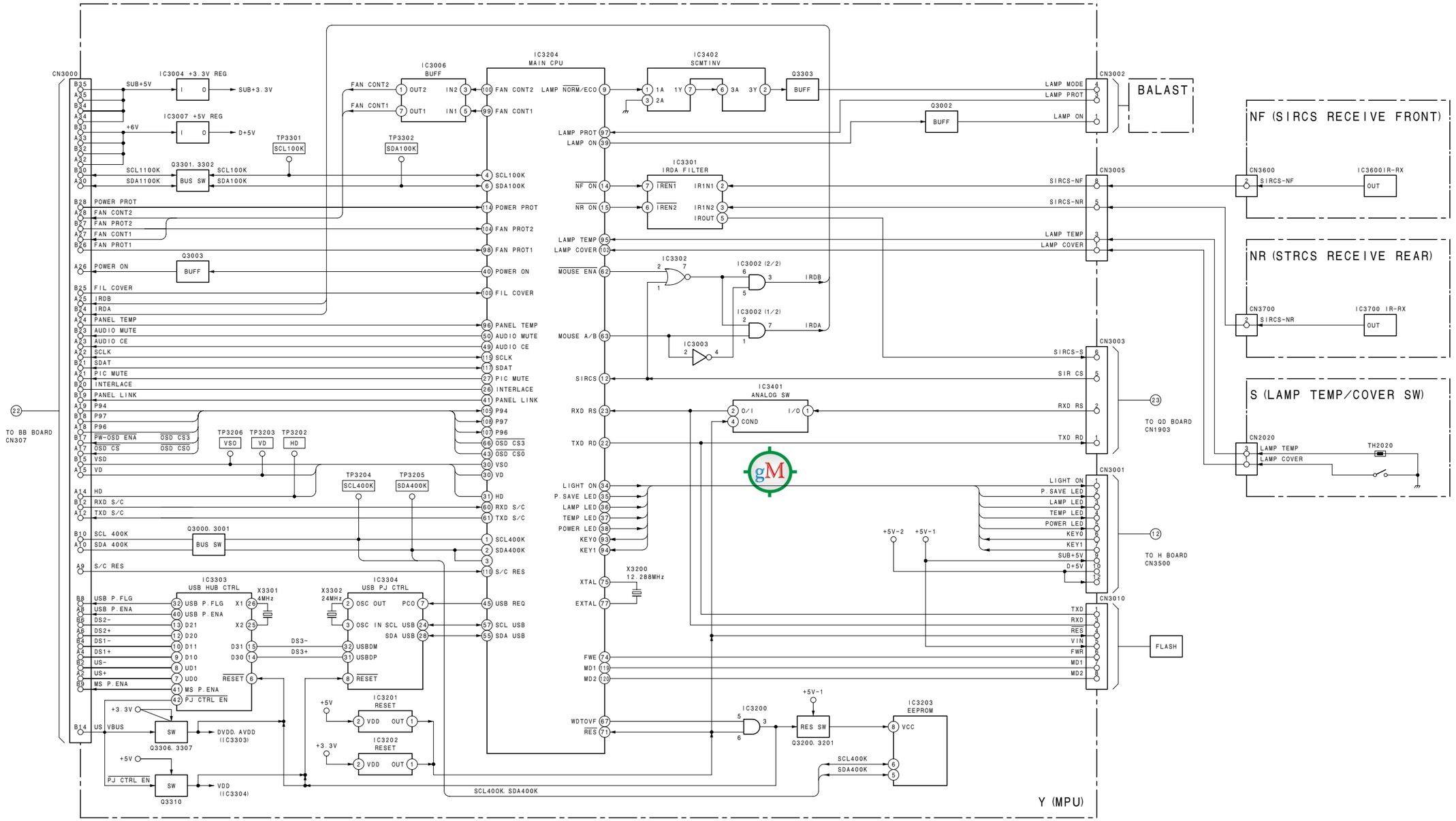
BB BLOCK


IC502
OSD PROCESS. LCD CONT
IC506
EVN R. G. B. DEC
CN500
CN501
CN502
TO BB BOARD
CN309
TO BB BOARD
CN311
TO C BOARD
CN605
IC505 (4/4)
IC505 (1/4)
IC505 (3/4)
IC505 (2/4)
IC511
RESET
IC503
EEPROM
IC501
CLK GEN
IC500 (1/6)
Q500. 501
D+3. 3V
DRE0-DRE7
DGE0-DGE7
DBE0-DBE7
DR00-DR07
DG00-DG07
DB00-DB07
RE0-RE9
GE0-GE9
BE0-BE9
EVN OSD R0
EVN OSD R1
EVN OSD R2
EVN IN R0
EVN IN R7
EVN OUT R0
EVN OUT R9
EVN OSD G0
EVN OSD G1
EVN OSD G2
EVN IN G0
EVN IN G7
EVN OUT G0
EVN OUT G9
EVN OSD B0
EVN OSD B1
EVN OSD B2
EVN IN B0
EVN IN B7
EVN OUT B0
EVN OUT B9
EVN YM
EVN YS
ODD YM
ODD YS
VSYNC IN
HSYN IN
ODD OSD R0
ODD OSD R1
ODD OSD R2
ODD IN R0
ODD IN R7
ODD OSD G0
ODD OSD G1
ODD OSD G2
ODD IN G0
ODD IN G7
ODD OSD B0
ODD OSD B1
ODD OSD B2
ODD IN B0
ODD IN B7
RESET
RSDA
RSCL
HSCL
HSDA
LCD CLR/CLP
SID
CNT1B
CNT1A
CNT2B
CNT2A
INV CNT
LCD FRP
LCD HST
LCD VCK
LCD VST
LCD PRG
LCD PCG
LCD ENB
LCD RGT
LCD DWN
LCD HCK2
LCD BLK
LCD HCK1
CLOCK
CLOCK2X
POSCONT1
POSCONT2
FRP
HST
VCK
VST
PRG
PCG
ENB
RGT
DWN
HCK2
BLK
HCK1
CLKA4
CLKB3
CLKA1
CLKA3
REF
IOR
IOG
IOB
CLOCK
EVENR
EVENG
EVENB
CLP
ODDR
ODDG
ODDB
SID
POSCONT1
POSCONT2
INVCNT
FRP
HST
VCK
VST
PRG
PCG
ENB
RGT
DWN
HCK2
BLK
HCK1
ECLK
SCL100K
SDA100K
PANEL TEMP
PW OSD ENA
DGO0
DGO1
DGO2
DGO3
DGO4
DGO5
DGO6
DGO7
DBO0
DBO1
DBO2
DBO3
DBO4
DBO5
DBO6
DBO7
RESET
SCL400K
SDA400K
OSD CS
DISP
BUSY
OSD RES
PANEL TEMP
SDATOSD
SCLKOSD
SCL100K
SDA100K
DCLK
VCC
EO
SDA
SCL
VDD
OUT
SW
BC (LCD R, G, B, DEC, LCD CONT.)

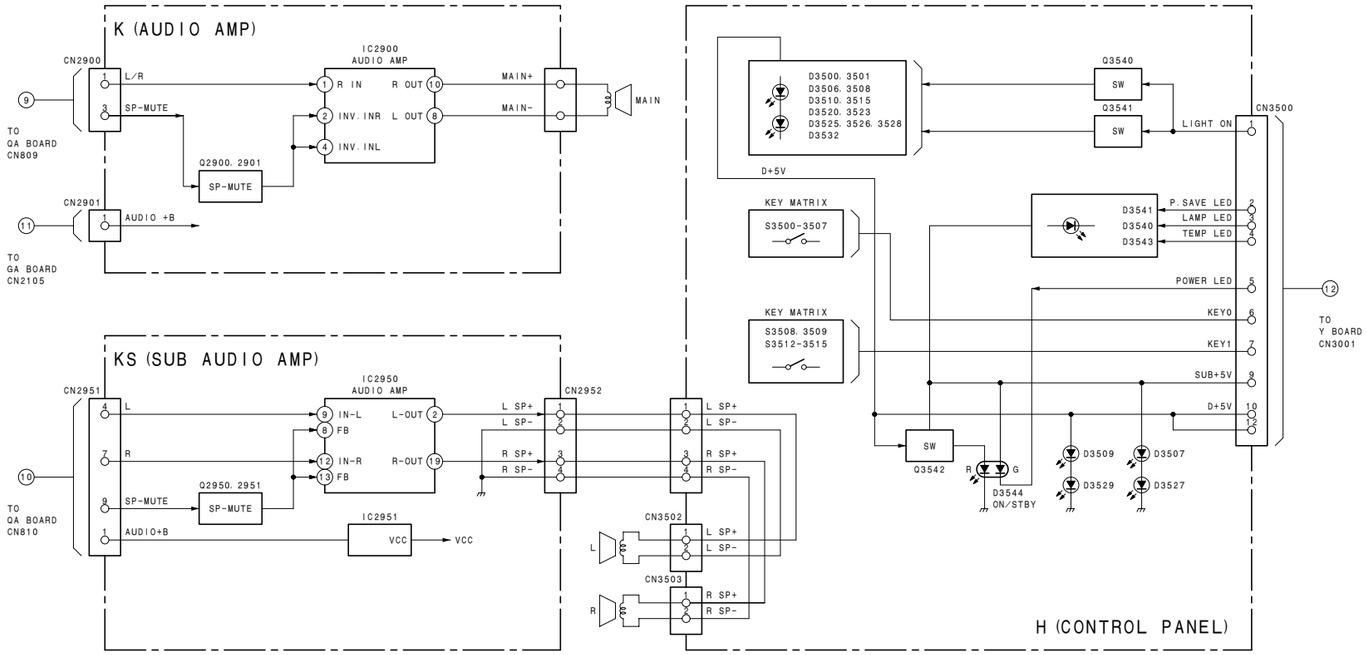
BC BLOCK

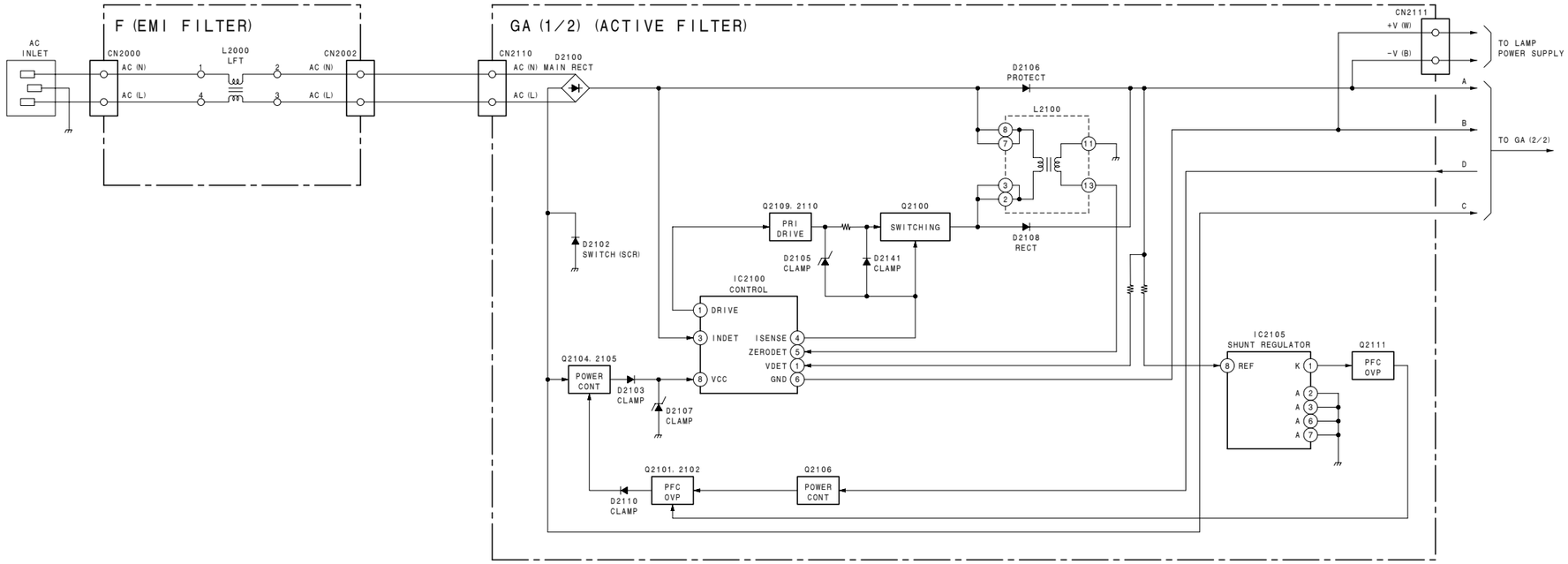

IC601
EVEN R/G/B AMP
CN604
EVENR
EVENG
EVENB
CLP
IC610 (1/8)
R IN
G IN
B IN
R OUT
G OUT
B OUT
D/A
MAIN BR/GHTNESS
SCL
SDA
SCL 100K
SDA 100K
Q600. 601. 604
R/G/B BUFF
TP600
TP602
TP605
Q605
SW
IC606
R LCD DRIVER
IC608
R LCD DRIVER
IC602
DAC
IC603. 604
G LCD DRIVER
(SAME AS R PROCESS)
IC605. 607
B LCD DRIVER
(SAME AS R PROCESS)
Q607. 609
R-SID BUFF
Q602. 603
G-SID BUFF
Q606. 608
B-SID BUFF
PB DIR
RGT
SCEN
DLY-CON
V33
R VCOM
G VCOM
B VCOM
SID-OUT
VCOM OUT
DIRCTR
VID1-VID6
VID7-VID12
+15. 5V
CN602
CN600
CN601
LCD PANEL (R)
LCD PANEL (G)
LCD PANEL (B)
IC617
IC610 (6/8)
IC616 (1/8)
IC610 (4/8)
IC616 (6/8)
IC615 (5/8)
IC616 (2/8)
IC616 (3/8)
IC610 (7/8)
IC610 (5/8)
IC612 (1/6)
IC616 (4/8)
IC612 (2/6)
IC610 (3/8)
IC616 (8/8)
IC610 (2/8)
IC609
PECLDRV
IC610 (8/8)
IC612 (6/6)
IC612 (5/6)
TH600
PANEL TEMP
IC600
+12V REG
+17V
+12V
IC613
A+5V REG
IC615
D5V REG
IC611
+15. 5V REG
6V
17V
A+5V
D5V-2
+15. 5V
CN603
TO BC BOARD
CN501
TO GA BOARD
CN2104
C (LCD DRIVER)

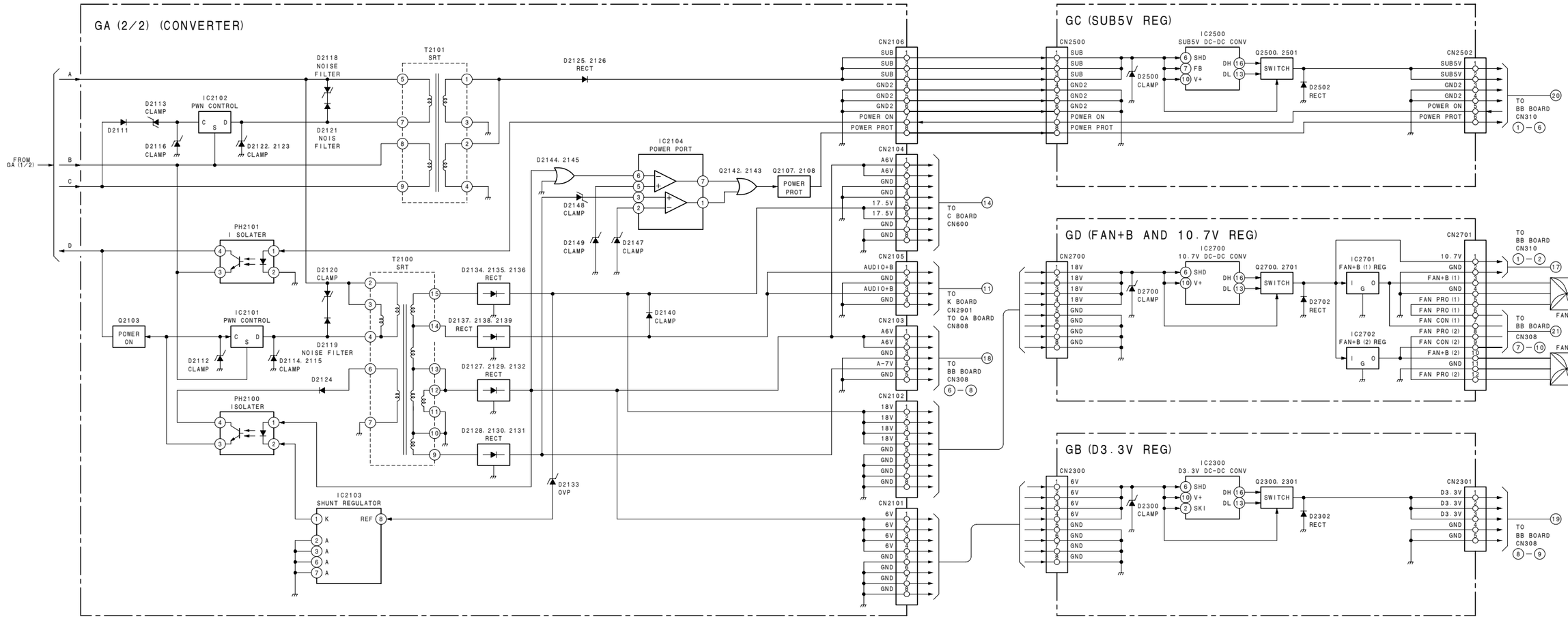
C BLOCK



Y, S, NF, NR BLOCK


K (AUDIO AMP)
CN2900
L/R
SP-MUTE
IC2900
AUDIO AMP
R IN
R OUT
INV. INR
L OUT
INV. INL
MAIN+
MAIN-
MAIN
Q2900, 2901
SP-MUTE
CN2901
AUDIO +B
TO
QA BOARD
CN809
TO
GA BOARD
CN2105
KS (SUB AUDIO AMP)
CN2951
IC2950
AUDIO AMP
IN-L
L-OUT
FB
IN-R
R-OUT
Q2950, 2951
SP-MUTE
AUDIO+B
IC2951
VCC
CN2952
L SP+
L SP-
R SP+
R SP-
CN3502
CN3503
TO
QA BOARD
CN810
H (CONTROL PANEL)
D3500, 3501
D3506, 3508
D3510, 3515
D3520, 3523
D3525, 3526, 3528
D3532
Q3540
Q3541
SW
LIGHT ON
CN3500
D+5V
KEY MATRIX
S3500-3507
S3508, 3509
S3512-3515
D3541
D3540
D3543
P.SAVE LED
LAMP LED
TEMP LED
POWER LED
KEY0
KEY1
SUB+5V
D+5V
TO
Y BOARD
CN3001
Q3542
D3544
ON/STBY
D3509
D3507
D3529
D3527


F (EMI FILTER)
AC INLET
CN2000
AC (N)
AC (L)
L2000 LFT
CN2002
GA (1/2) (ACTIVE FILTER)
CN2110
D2100 MAIN RECT
D2102 SWITCH (SCR)
D2106 PROTECT
L2100
Q2109, 2110
PRI DRIVE
Q2100
SWITCHING
D2108 RECT
D2105 CLAMP
D2141 CLAMP
IC2100 CONTROL
DRIVE
INDET
ISENSE
ZERODET
VDET
GND
VCC
Q2104, 2105
POWER CONT
D2103 CLAMP
D2107 CLAMP
Q2101, 2102
PFC OVP
D2110 CLAMP
Q2106
POWER CONT
IC2105 SHUNT REGULATOR
REF
K
A
Q2111
PFC OVP
CN2111
+V (W)
-V (B)
TO LAMP POWER SUPPLY
TO GA (2/2)



GA BLOCK (2/2)
GB, GC, GD BLOCK

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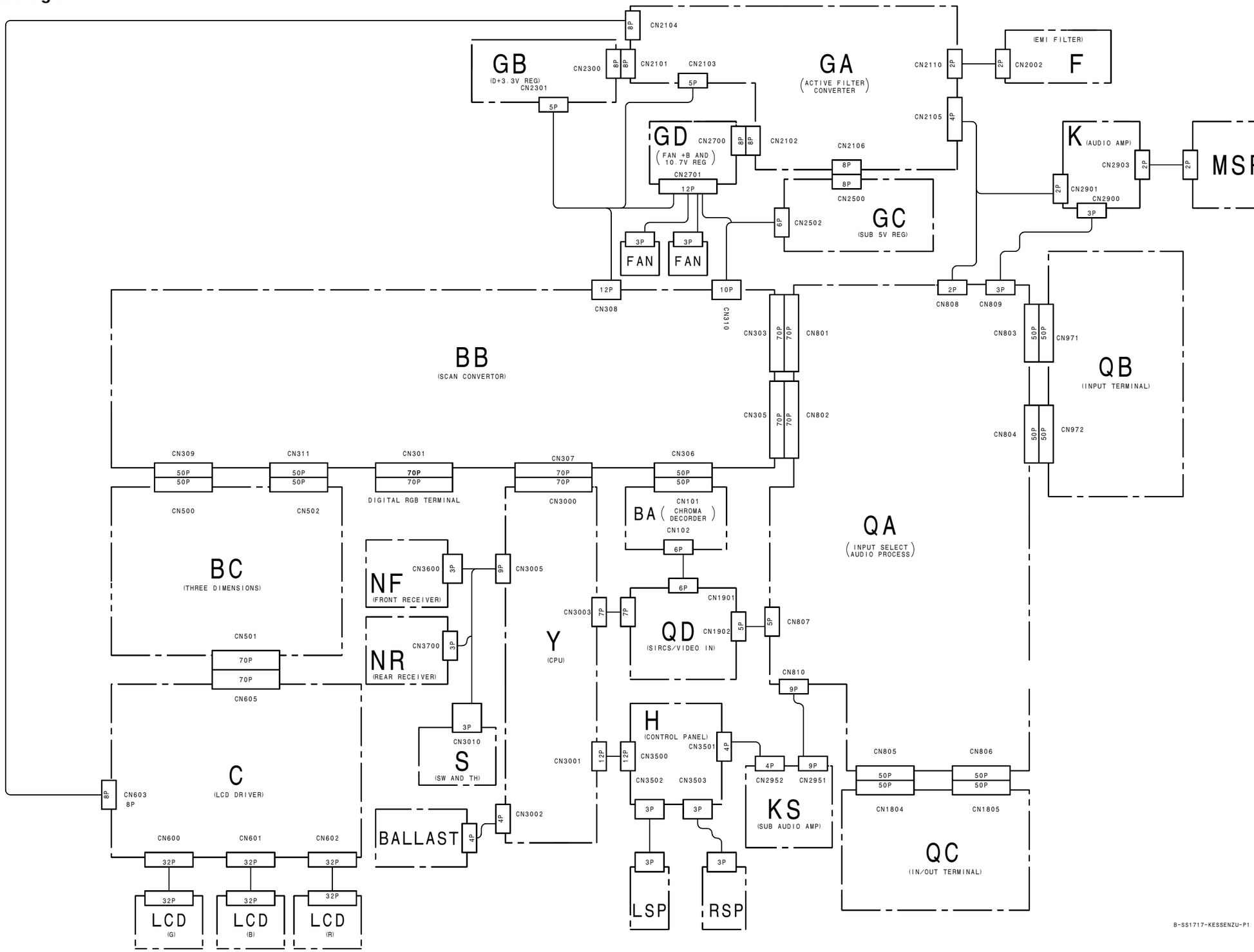
Section 8
Diagrams

8-1. Frame Schematic Diagram



BB

CN307 70P

A1	GND	B1	GND
A2	US+	B2	US-
A3	GND	B3	GND
A4	DS1+	B4	DS1-
A5	GND	B5	GND
A6	DS2+	B6	DS2-
A7	GND	B7	GND
A8	USBP.ENA	B8	USBP.FLG
A9	S/C RES	B9	MSP.ENA
A10	SDA400K	B10	SCL400K
A11	GND	B11	GND
A12	TXDS/C	B12	RXDS/C
A13	GND	B13	GND
A14	HD	B14	US VBUS
A15	VD	B15	VSO
A16	GND	B16	GND
A17	OSD_CS	B17	PW-OSD_ENA
A18	DISP	B18	BUSY
A19	OSD_RES	B19	PANEL LINK
A20	GND	B20	INTERLACE
A21	PIC MUTE	B21	SDAT
A22	SCLK	B22	GND
A23	AUDIO CE	B23	AUDIO MUTE
A24	PANEL TEMP	B24	IRDA
A25	IRDB	B25	FILTER COVER
A26	POWER ON	B26	FAN PROT1
A27	FAN CONT1	B27	FAN PROT2
A28	FAN CONT2	B28	POWER PROT
A29	GND	B29	GND
A30	SDA100K	B30	SCL100K
A31	GND	B31	GND
A32	+6V	B32	+6V
A33	+6V	B33	+6V
A34	SUB+5V	B34	SUB+5V
A35	SUB+5V	B35	SUB+5V

CN305 70P

A1	IRDA	B1	IRDB
A2	GND	B2	GND
A3	DS2+	B3	DS2+
A4	DS2-	B4	DS2-
A5	YC/OTHER	B5	CV/OTHER
A6	GND	B6	GND
A7	R/R-Y	B7	R/R-Y
A8	GND	B8	GND
A9	G/Y	B9	G/Y
A10	GND	B10	GND
A11	B/B-Y	B11	B/B-Y
A12	GND	B12	GND
A13	H	B13	H
A14	GND	B14	GND
A15	V	B15	V
A16	GND	B16	GND
A17	RGBSYNC	B17	RGBSYNC
A18	GND	B18	GND
A19	V-R	B19	V-R
A20	GND	B20	GND
A21	V-G	B21	V-G
A22	GND	B22	GND
A23	V-B	B23	V-B
A24	GND	B24	GND
A25	V-HD	B25	V-HD
A26	V-VD	B26	V-VD
A27	GND	B27	GND
A28	V-CLP	B28	V-CLP
A29	GND	B29	GND
A30	SDA100K	B30	SCL100K
A31	GND	B31	GND
A32	+6V	B32	+6V
A33	+6V	B33	+6V
A34	10V	B34	-7V
A35	10V	B35	-7V

CN300 20P

1	TX0-	2	TX0+
3	SHLD0	4	SHLD2
5	TX2-	6	TX2+
7	DDC_CLK	8	DDC_DAT
9	RESERVED	10	RESERVED
11	TXC-	12	TXC+
13	SHLDC	14	SHLD1
15	TX1-	16	TX1+
17	RESERVED	18	HPD
19	+5V	20	GND

CN302 3P :SMD

1	VCC
2	IRRCVR
3	GND

CN312 7P :SMD

1	VCC
2	RXD
3	TXD
4	GND
5	EXTSW
6	WDTEN
7	GND

CN308 12P

1	10V	2	GND
3	6V	4	6V
5	GND	6	-7V
7	GND	8	D3.3V
9	D3.3V	10	D3.3V
11	GND	12	GND

CN310 10P

1	SUB 5V	2	SUB 5V
3	GND	4	GND
5	POWER ON	6	POWER PROT
7	FANPROT1	8	FANCONT1
9	FANPROT2	10	FANCONT2

CN309 50P

A1	DRE0	B1	GND
A2	DRE1	B2	GND
A3	DRE2	B3	D3.3V
A4	DRE3	B4	D3.3V
A5	DRE4	B5	D3.3V
A6	DRE5	B6	D3.3V
A7	DRE6	B7	GND
A8	DRE7	B8	GND
A9	DGE0	B9	DVS
A10	DGE1	B10	DVS
A11	DGE2	B11	GND
A12	DGE3	B12	GND
A13	DGE4	B13	DHS
A14	DGE5	B14	DHS
A15	DGE6	B15	GND
A16	DGE7	B16	GND
A17	DBE0	B17	DRO0
A18	DBE1	B18	DRO1
A19	DBE2	B19	DRO2
A20	DBE3	B20	DRO3
A21	DBE4	B21	DRO4
A22	DBE5	B22	DRO5
A23	DBE6	B23	DRO6
A24	DBE7	B24	DRO7
A25	GND	B25	GND

CN311 50P

A1	DCLK	B1	GND
A2	DCLK	B2	GND
A3	GND	B3	GND
A4	DGO0	B4	DBO0
A5	DGO1	B5	DBO1
A6	DGO2	B6	DBO2
A7	DGO3	B7	DBO3
A8	DGO4	B8	DBO4
A9	DGO5	B9	DBO5
A10	DGO6	B10	DBO6
A11	DGO7	B11	DBO7
A12	GND	B12	GND
A13	D3.3V	B13	RESET
A14	D3.3V	B14	RESET
A15	GND	B15	GND
A16	OSD_CS	B16	NC
A17	NC	B17	PW OSD ENA
A18	DISP	B18	DISP
A19	BUSY	B19	OSD_RES
A20	GND	B20	PANEL TEMP
A21	NC	B21	GND
A22	NC	B22	GND
A23	GND	B23	SCL400K
A24	GND	B24	SCL100K
A25	SDA400K	B25	SDA100K
A26	GND	B26	GND

CN301 70P

A1	GND	B1	A19
A2	GND	B2	A18
A3	GND	B3	A17
A4	GND	B4	A16
A5	A15	B5	A14
A6	A13	B6	A12
A7	A11	B7	A10
A8	A9	B8	A8
A9	A7	B9	A6
A10	A5	B10	A4
A11	A3	B11	A2
A12	A1	B12	A0
A13	GND	B13	BHENN
A14	GND	B14	ROMOEN
A15	GND	B15	ROMOEN
A16	3.3V	B16	ROMWEN
A17	3.3V	B17	ROMWEN
A18	3.3V	B18	CS2
A19	3.3V	B19	CS3
A20	GND	B20	RESETN
A21	GND	B21	NMI
A22	GND	B22	FCEN
A23	GND	B23	BOOTWE
A24	GND	B24	VPPEN
A25	D15	B25	D14
A26	D13	B26	D12
A27	D11	B27	D10
A28	D9	B28	D8
A29	D7	B29	D6
A30	D5	B30	D4
A31	D3	B31	D2
A32	D1	B32	D0
A33	NC	B33	NC
A34	6V	B34	6V
A35	6V	B35	6V

CN303 70P

A1	CLP	B1	CLP
A2	GND	B2	GND
A3	A3.3V	B3	A3.3V
A4	V	B4	V
A5	GND	B5	GND
A6	H	B6	H
A7	GND	B7	GND
A8	B	B8	B
A9	GND	B9	GND
A10	G	B10	G
A11	GND	B11	GND
A12	R	B12	R
A13	GND	B13	GND
A14	AUDIO MUTE	B14	SCLK
A15	SDAT	B15	AUDIO CE
A16	GND	B16	GND
A17	US+	B17	US+
A18	US-	B18	US-
A19	GND	B19	USBP.FLG
A20	DS1+	B20	DS1-
A21	MSP.ENA	B21	US VBUS
A22	GND	B22	USBP.ENA
A23	SUB 5V	B23	SUB 5V
A24	SUB 5V	B24	SUB 5V
A25	SUB 5V	B25	SUB 5V
A26	GND	B26	GND
A27	BNC V	B27	BNC V
A28	GND	B28	GND
A29	BNC H	B29	BNC H
A30	GND	B30	GND
A31	BNC B	B31	BNC B
A32	GND	B32	GND
A33	BNC G	B33	BNC G
A34	GND	B34	GND
A35	BNC R	B35	BNC R

CN306 50P

A1	R/R-Y	B1	R/R-Y
A2	GND	B2	GND
A3	G/Y	B3	G/Y
A4	GND	B4	GND
A5	B/B-Y	B5	B/B-Y
A6	GND	B6	H
A7	GND	B7	V
A8	GND	B8	RGBSYNC
A9	GND	B9	V-CLP
A10	GND	B10	Y/C OTHER
A11	V-R	B11	V-R
A12	GND	B12	GND
A13	V-G	B13	V-G
A14	GND	B14	GND
A15	V-B	B15	V-B
A16	GND	B16	CV/OTHER
A17	GND	B17	V-HD
A18	GND	B18	V-VD
A19	GND	B19	GND
A20	SDA100K	B20	SCL100K
A21	GND	B21	GND
A22	+6V	B22	+6V
A23	+6V	B23	+6V
A24	+10V	B24	GND
A25	+10V	B25	GND

BC

CN502 50P

A1	DCLK	B1	GND
A2	DCLK	B2	GND
A3	GND	B3	GND
A4	DGO0	B4	DBO0
A5	DGO1	B5	DBO1
A6	DGO2	B6	DBO2
A7	DGO3	B7	DBO3
A8	DGO4	B8	DBO4
A9	DGO5	B9	DBO5
A10	DGO6	B10	DBO6
A11	DGO7	B11	DBO7
A12	GND	B12	GND
A13	D3.3V	B13	RESET
A14	D3.3V	B14	RESET
A15	GND	B15	GND
A16	OSD_CS0	B16	NC
A17	NC	B17	PW OSD ENA
A18	DISP	B18	BUSY
A19	OSD_RES	B19	PANEL TEMP
A20	GND	B20	GND
A21	NC	B21	NC
A22	GND	B22	GND
A23	SCL400K	B23	SCL100K
A24	SDA400K	B24	SDA100K
A25	GND	B25	GND

CN500 50P

A1	DRE0	B1	GND
A2	DRE1	B2	GND
A3	DRE2	B3	D3.3V
A4	DRE3	B4	D3.3V
A5	DRE4	B5	D3.3V
A6	DRE5	B6	D3.3V
A7	DRE6	B7	GND
A8	DRE7	B8	GND
A9	DGE0	B9	DVS
A10	DGE1	B10	DVS
A11	DGE2	B11	GND
A12	DGE3	B12	GND
A13	DGE4	B13	DHS
A14	DGE5	B14	DHS
A15	DGE6	B15	GND
A16	DGE7	B16	GND
A17	DBE0	B17	DRO0
A18	DBE1	B18	DRO1
A19	DBE2	B19	DRO2
A20	DBE3	B20	DRO3
A21	DBE4	B21	DRO4
A22	DBE5	B22	DRO5
A23	DBE6	B23	DRO6
A24	DBE7	B24	DRO7
A25	GND	B25	GND

CN501 70P

A1	PANEL TEMP	B1	GND
A2	SDA100K	B2	SCL100K
A3	GND	B3	GND
A4	ECLK	B4	HCK1
A5	ECLK	B5	HCK1
A6	GND	B6	HCK2
A7	BLK	B7	HCK2
A8	DWN	B8	RGT
A9	ENB	B9	PCG
A10	ENB	B10	PCG
A11	GND	B11	GND
A12	CLP	B12	PRG
A13	CLP	B13	PRG
A14	VST	B14	VST
A15	VST	B15	VCK
A16	VCK	B16	HST
A17	FRP	B17	HST
A18	FRP	B18	GND
A19	GND	B19	POSCONT2
A20	POSCONT2	B20	INVCNT
A21	INVCNT	B21	POSCONT2
A22	POSCONT1	B22	SID
A23	SID	B23	GND
A24	GND	B24	A5V
A25	A5V	B25	A5V
A26	GND	B26	GND
A27	EVENB	B27	EVENG
A28	EVENB	B28	EVENG
A29	GND	B29	GND
A30	EVENR	B30	ODDB
A31	EVENR	B31	ODDB
A32	GND	B32	GND
A33	ODDG	B33	ODDR
A34	ODDG	B34	ODDR
A35	GND	B35	GND

CN503 8P WHT :SMD

8	VCC
7	SDO
6	SDI
5	ISPEN
4	PLUG
3	MODE
2	GND
1	SCLK

C

CN601 32P FPC

1	PS2G	2	VSSGR
3	VSIG1	4	VSIG2
5	VSIG3	6	VSIG4
7	VSIG5	8	VSIG6
9	VSIG7	10	VSIG8
11	VSIG9	12	VSIG10
13	VSIG11	14	VSIG12
15	HVDD	16	RGT
17	HST	18	HCK2
19	HCK1	20	VSS
21	VSSGL	22	BLK
23	ENB	24	VCK
25	VST	26	DWN
27	HB	28	VB
29	PCG	30	VVDD
31	COM	32	SOUT

CN603 32P FPC

1	PS2G	2	VSSGR
3	VSIG1	4	VSIG2
5	VSIG3	6	VSIG4
7	VSIG5	8	VSIG6
9	VSIG7	10	VSIG8
11	VSIG9	12	VSIG10
13	VSIG11	14	VSIG12
15	HVDD	16	RGT
17	HST	18	HCK2
19	HCK1	20	VSS
21	VSSGL	22	BLK
23	ENB	24	VCK
25	VST	26	DWN
27	HB	28	VB
29	PCG	30	VVDD
31	COM	32	SOUT

CN605 70P TO BC CN501

PANEL TEMP	A1	GND	B1
SDA100K	A2	SCL100K	B2
GND	A3	GND	B3
ECLK	A4	HCK1	B4
ECLK	A5	HCK1	B5
GND	A6	HCK2	B6
HCK2	A7	BLK	B7
DWN	A8	RGT	B8
ENB	A9	PCG	B9
PCG	B10	GND	A11
GND	B11	CLP	A12
PRG	B12	CLP	A13
PRG	B13	VST	A14
VCK	B14	VST	A15
VCK	B15	HST	A16
FRP	B16	HST	A17
FRP	B17	GND	A18
GND	B18	POSCONT2	A19
INVCNT	B19	POSCONT2	A20
INVCNT	B20	POSCONT1	A21
POSCONT1	B21	SID	A22
SID	B22	GND	A23
GND	B23	A5V	A24
A5V	B24	A5V	A25
A5V	B25	GND	A26
GND	B26	EVENB	A27
EVENG	B27	EVENB	A28
EVENG	B28	GND	A29
GND	B29	EVENR	A30
ODDB	B30	EVENR	A31
ODDB	B31	GND	A32
GND	B32	ODDG	A33
ODDR	B33	ODDR	A34
ODDG	B34	GND	A35
GND	B35		

CN602 32P FPC

1	PS2G	2	VSSGR
3	VSIG1	4	VSIG2
5	VSIG3	6	VSIG4
7	VSIG5	8	VSIG6
9	VSIG7	10	VSIG8
11	VSIG9	12	VSIG10
13	VSIG11	14	VSIG12
15	HVDD	16	RGT
17	HST	18	HCK2
19	HCK1	20	VSS
21	VSSGL	22	BLK
23	ENB	24	VCK
25	VST	26	DWN
27	HB	28	VB
29	PCG	30	VVDD
31	COM	32	SOUT

CN600 6P :SMD

1	6V
2	6V
3	GND
4	GND
5	17.5V
6	17.5V
7	GND
8	GND

GA

CN2106 8P :B-TO-B TO GC

1	SUB
2	SUB
3	SUB
4	GND 2
5	GND 2
6	GND 2
7	POWER ON
8	POWER PROT

CN2105 4P RED :S-MICRO TO K

1	AUDIO+B
2	GND
3	AUDIO+B
4	GND

CN2104 8P WHT :S-MICRO TO C

1	A6V
2	A6V
3	GND
4	GND
5	17.5V
6	17.5V
7	GND
8	GND

1	A6V
2	A6V
3	GND
4	A-7V
5	GND

CN2103 5P BLK :S-MICRO

CN2102 8P :B-TO-B TO GD

1	18V
2	18V
3	18V
4	18V
5	GND
6	GND
7	GND
8	GND

CN2101 8P :B-TO-B TO GB

1	6V
2	6V
3	6V
4	6V
5	GND
6	GND
7	GND
8	GND

GD

CN2701 12P WHT

1	10.7V	2	GND
3	FAN+B (1)	4	GND
5	FAN PRO (1)	6	FAN PRO (1)
7	FAN CON (1)	8	FAN PRO (2)
9	FAN CON (2)	10	FAN+B (2)
11	GND	12	FAN PRO (2)

CN2700 8P :B-TO-B

18V	1	18V	2
18V	3	18V	4
GND	5	GND	6
GND	7	GND	8

GB

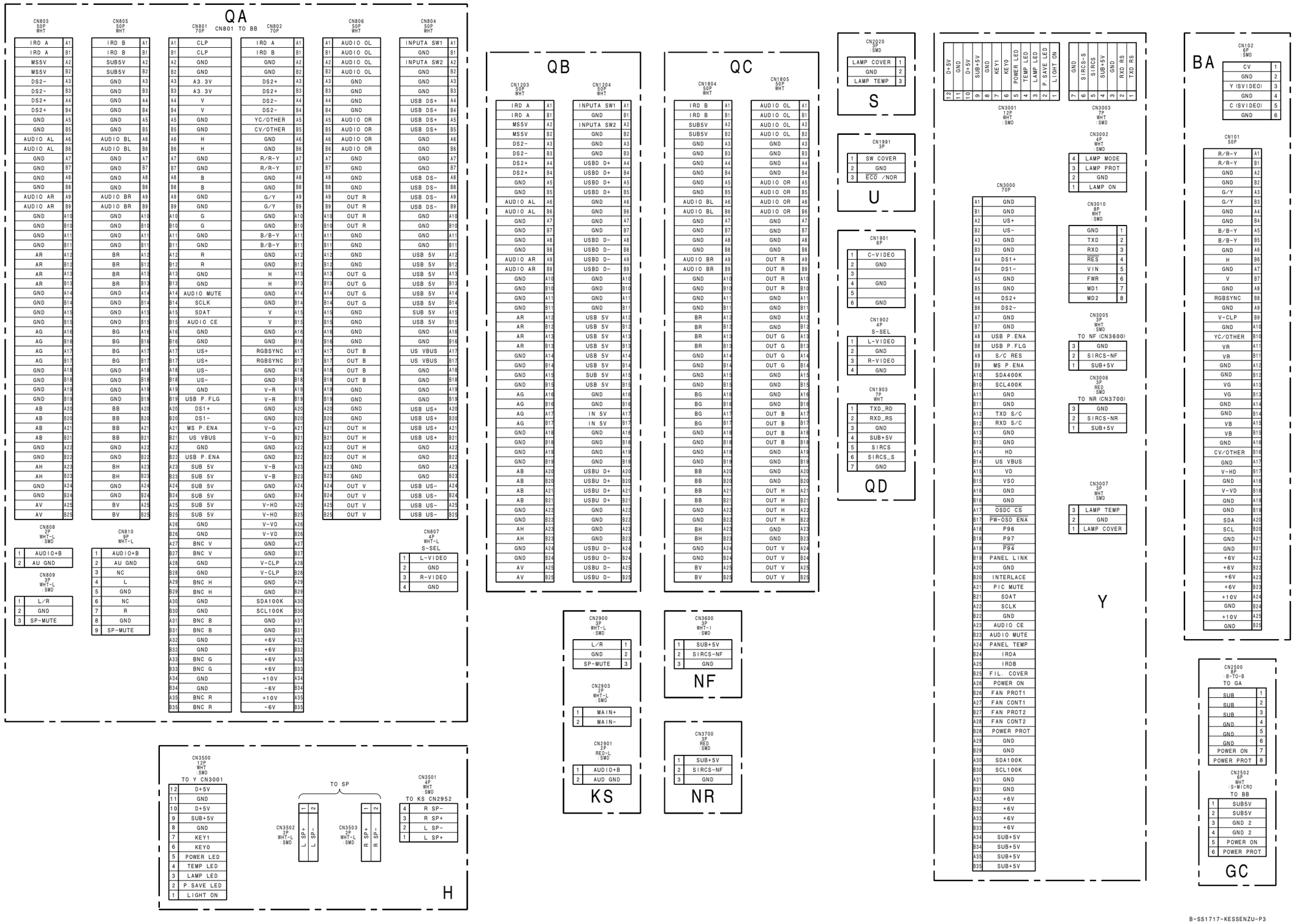
CN2300 8P :B-TO-B

6V	1
6V	2
6V	3
6V	4
GND	5
GND	6
GND	7
GND	8

CN2301 5P WHT :S-MICRO TO BB

1	D3.3V
2	D3.3V
3	D3.3V
4	GND
5	GND

B-SS1717-KESSENZU-P2


QA
CN803 50P WHT
IRD A A1
IRD A B1
MS5V A2
MS5V B2
DS2- A3
DS2- B3
DS2+ A4
DS2+ B4
GND A5
GND B5
AUDIO AL A6
AUDIO AL B6
GND A7
GND B7
GND A8
GND B8
AUDIO AR A9
AUDIO AR B9
GND A10
GND B10
GND A11
GND B11
AR A12
AR B12
AR A13
AR B13
GND A14
GND B14
GND A15
GND B15
AG A16
AG B16
AG A17
AG B17
GND A18
GND B18
GND A19
GND B19
AB A20
AB B20
AB A21
AB B21
GND A22
GND B22
AH A23
AH B23
GND A24
GND B24
AV A25
AV B25
CN805 50P WHT
IRD B A1
IRD B B1
SUB5V A2
SUB5V B2
GND A3
GND B3
GND A4
GND B4
GND A5
GND B5
AUDIO BL A6
AUDIO BL B6
GND A7
GND B7
GND A8
GND B8
AUDIO BR A9
AUDIO BR B9
GND A10
GND B10
GND A11
GND B11
BR A12
BR B12
BR A13
BR B13
GND A14
GND B14
GND A15
GND B15
BG A16
BG B16
BG A17
BG B17
GND A18
GND B18
GND A19
GND B19
BB A20
BB B20
BB A21
BB B21
GND A22
GND B22
BH A23
BH B23
GND A24
GND B24
BV A25
BV B25
CN801 70P
CN801 TO BB
CN802 70P
CN806 50P WHT
CN804 50P WHT
CN808 2P WHT-L :SMD
AUDIO+B 1
AU GND 2
CN809 3P WHT-L :SMD
L/R 1
GND 2
SP-MUTE 3
CN810 9P WHT-L
AUDIO+B 1
AU GND 2
NC 3
L 4
GND 5
NC 6
R 7
GND 8
SP-MUTE 9
CN807 4P WHT-L S-SEL
L-VIDEO 1
GND 2
R-VIDEO 3
GND 4
QB
CN1203 50P WHT
CN1204 50P WHT
QC
CN1804 50P WHT
CN1805 50P WHT
CN2020 3P :SMD
LAMP COVER 1
GND 2
LAMP TEMP 3
S
CN1991 3P
SW COVER 1
GND 2
ECO /NOR 3
U
CN1901 6P
C-VIDEO 1
GND 2
3
GND 4
5
GND 6
CN1902 4P S-SEL
L-VIDEO 1
GND 2
R-VIDEO 3
GND 4
CN1903 7P WHT
TXD_RD 1
RXD_RS 2
GND 3
SUB+5V 4
SIRCS 5
SIRCS_S 6
GND 7
QD
CN3001 12P WHT :SMD
D+5V 12
GND 11
D+5V 10
SUB+5V 9
GND 8
KEY1 7
KEY0 6
POWER LED 5
TEMP LED 4
LAMP LED 3
P.SAVE LED 2
LIGHT ON 1
CN3003 7P WHT :SMD
GND 7
SIRCS-S 6
SIRCS 5
SUB+5V 4
GND 3
RXD RS 2
TXD RS 1
CN3002 4P WHT :SMD
LAMP MODE 4
LAMP PROT 3
GND 2
LAMP ON 1
CN3010 8P WHT :SMD
GND 1
TXD 2
RXD 3
RES 4
VIN 5
FWR 6
MD1 7
MD2 8
CN3005 3P WHT :SMD TO NF (CN3600)
GND 3
SIRCS-NF 2
SUB+5V 1
CN3006 3P RED :SMD TO NR (CN3700)
GND 3
SIRCS-NR 2
SUB+5V 1
CN3000 70P
A1 GND
B1 GND
A2 US+
B2 US-
A3 GND
B3 GND
A4 DS1+
B4 DS1-
A5 GND
B5 GND
A6 DS2+
B6 DS2-
A7 GND
B7 GND
A8 USB P.ENA
B8 USB P.FLG
A9 S/C RES
B9 MS P.ENA
A10 SDA400K
B10 SCL400K
A11 GND
B11 GND
A12 TXD S/C
B12 RXD S/C
A13 GND
B13 GND
A14 HD
B14 US VBUS
A15 VD
B15 VSO
A16 GND
B16 GND
A17 OSDC CS
B17 PW-OSD ENA
A18 P96
B18 P97
A19 P94
B19 PANEL LINK
A20 GND
B20 INTERLACE
A21 PIC MUTE
B21 SDAT
A22 SCLK
B22 GND
A23 AUDIO CE
B23 AUDIO MUTE
A24 PANEL TEMP
B24 IRDA
A25 IRDB
B25 FIL. COVER
A26 POWER ON
B26 FAN PROT1
A27 FAN CONT1
B27 FAN PROT2
A28 FAN CONT2
B28 POWER PROT
A29 GND
B29 GND
A30 SDA100K
B30 SCL100K
A31 GND
B31 GND
A32 +6V
B32 +6V
A33 +6V
B33 +6V
A34 SUB+5V
B34 SUB+5V
A35 SUB+5V
B35 SUB+5V
CN3007 3P WHT :SMD
LAMP TEMP 3
GND 2
LAMP COVER 1
Y
BA
CN102 6P :SMD
CV 1
GND 2
Y (SVIDEO) 3
GND 4
C (SVIDEO) 5
GND 6
CN101 50P
R/R-Y A1
R/R-Y B1
GND A2
GND B2
G/Y A3
G/Y B3
GND A4
GND B4
B/B-Y A5
B/B-Y B5
GND A6
H B6
GND A7
V B7
GND A8
RGBSYNC B8
GND A9
V-CLP B9
GND A10
YC/OTHER B10
VR A11
VR B11
GND A12
GND B12
VG A13
VG B13
GND A14
GND B14
VB A15
VB B15
GND A16
CV/OTHER B16
GND A17
V-HD B17
GND A18
V-VD B18
GND A19
GND B19
SDA A20
SCL B20
GND A21
GND B21
+6V A22
+6V B22
+6V A23
+6V B23
+10V A24
GND B24
+10V A25
GND B25
CN2500 8P :B-TO-B TO GA
SUB 1
SUB 2
SUB 3
GND 4
GND 5
GND 6
POWER ON 7
POWER PROT 8
CN2502 6P WHT :S-MICRO TO BB
SUB5V 1
SUB5V 2
GND 2 3
GND 2 4
POWER ON 5
POWER PROT 6
GC
CN2900 3P WHT-L :SMD
L/R 1
GND 2
SP-MUTE 3
CN2903 2P WHT-L :SMD
MAIN+ 1
MAIN- 2
CN2901 2P RED-L :SMD
AUDIO+B 1
AUD GND 2
KS
CN3600 3P WHT-I :SMD
SUB+5V 1
SIRCS-NF 2
GND 3
NF
CN3700 3P RED :SMD
SUB+5V 1
SIRCS-NF 2
GND 3
NR
CN3500 12P WHT :SMD TO Y CN3001
D+5V 12
GND 11
D+5V 10
SUB+5V 9
GND 8
KEY1 7
KEY0 6
POWER LED 5
TEMP LED 4
LAMP LED 3
P.SAVE LED 2
LIGHT ON 1
TO SP
CN3502 2P WHT-L :SMD
L SP+ 1
L SP- 2
CN3503 2P WHT-L :SMD
R SP+ 1
R SP- 2
CN3501 4P WHT :SMD TO KS CN2952
R SP- 4
R SP+ 3
L SP- 2
L SP+ 1
H
B-SS1717-KESSENZU-P3

8-2. Schematic Diagrams and Printed Wiring Boards

Note:

- Parts marked " * " differ according to the model/destination. Refer to the mount table for each function.
- The parts marked " # " on schematic diagrams are not mounted.
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics.
- All electrolytics are in 50 V unless otherwise specified.
- : fusible resistor
- : nonflammable resistor
- : panel designation and adjustment for repair
- Caution when replacing chip parts
  New parts must be attached after removal of the chip.
  Be careful not to heat the minus side of a tantalum capacitor, because it is easily damaged by the heat.

Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	※	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

[Measuring conditions, voltage and waveform]

- A voltage value is the reference value between the measurement point and the earth, when the NTSC color bar signal is received from the color bar generator (digital multi-meter used: 10 M ohms/V DC).
- A voltage value is the reference value between the measurement point and the earth, when the NTSC color bar signal and RGB color bar signal are received from the color bar generator (digital multi-meter used: 10 M ohms/V DC).
- Unit of voltage is V (volt).
- : B+line
- : B– line
- Voltage variations may occur due to normal production tolerances.
- No mark : NTSC (3.58 MHz) color bar signal.
- [ ] : RGB color bar signal is received.
- ★ : Measurement disabled.
- Circled numbers indicate the reference waveform.
- : Signal path.

The components identified marked ⚠ are critical for safety.
Replace only with the part number specified.

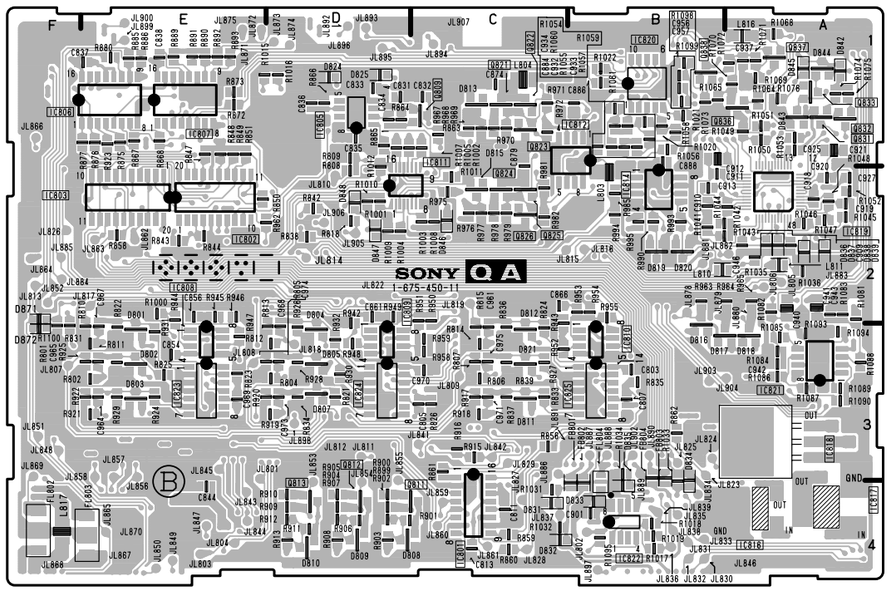
Les composants identifiés par la marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

QA

1-675-450-11

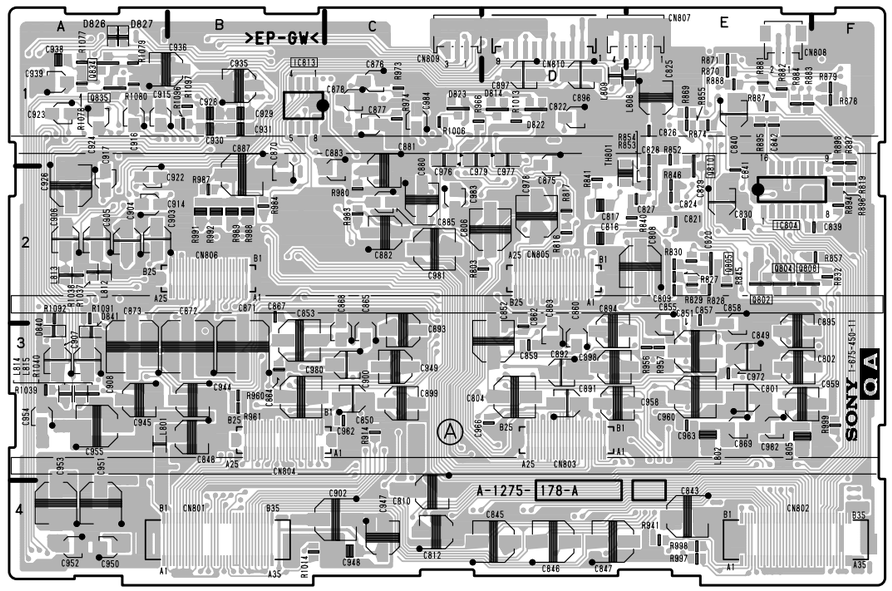
IC801	*	C-4
IC802	*	E-2
IC803	*	F-2
IC804		E-2
IC805	*	D-1
IC806	*	F-1
IC807	*	E-1
IC808	*	E-2
IC809	*	D-2
IC810	*	B-3
IC811	*	C-2
IC812	*	B-1
IC813		B-1
IC814	*	B-2
IC816	*	A-4
IC817	*	A-4
IC818	*	A-3
IC819	*	A-2
IC820	*	B-1
IC821	*	A-3
IC822	*	B-4
IC823	*	E-3
IC824	*	D-3
IC825	*	B-3
Q802		E-2
Q804		E-2
Q805		E-2
Q808		E-2
Q809	*	C-1
Q810		E-2
Q811	*	C-4
Q812	*	D-3
Q813	*	D-4
Q821	*	C-1
Q822	*	C-1
Q823	*	C-1
Q824	*	C-2
Q825	*	C-2
Q826	*	C-2
Q831	*	A-1
Q832	*	A-1
Q833	*	A-1
Q834		A-1
Q835		A-1
Q836	*	B-1
Q837	*	A-1
Q838	*	B-1

*:B Side mount



QA – B SIDE –

SUFFIX ; -11

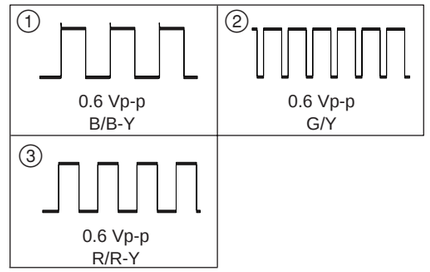


QA – A SIDE –

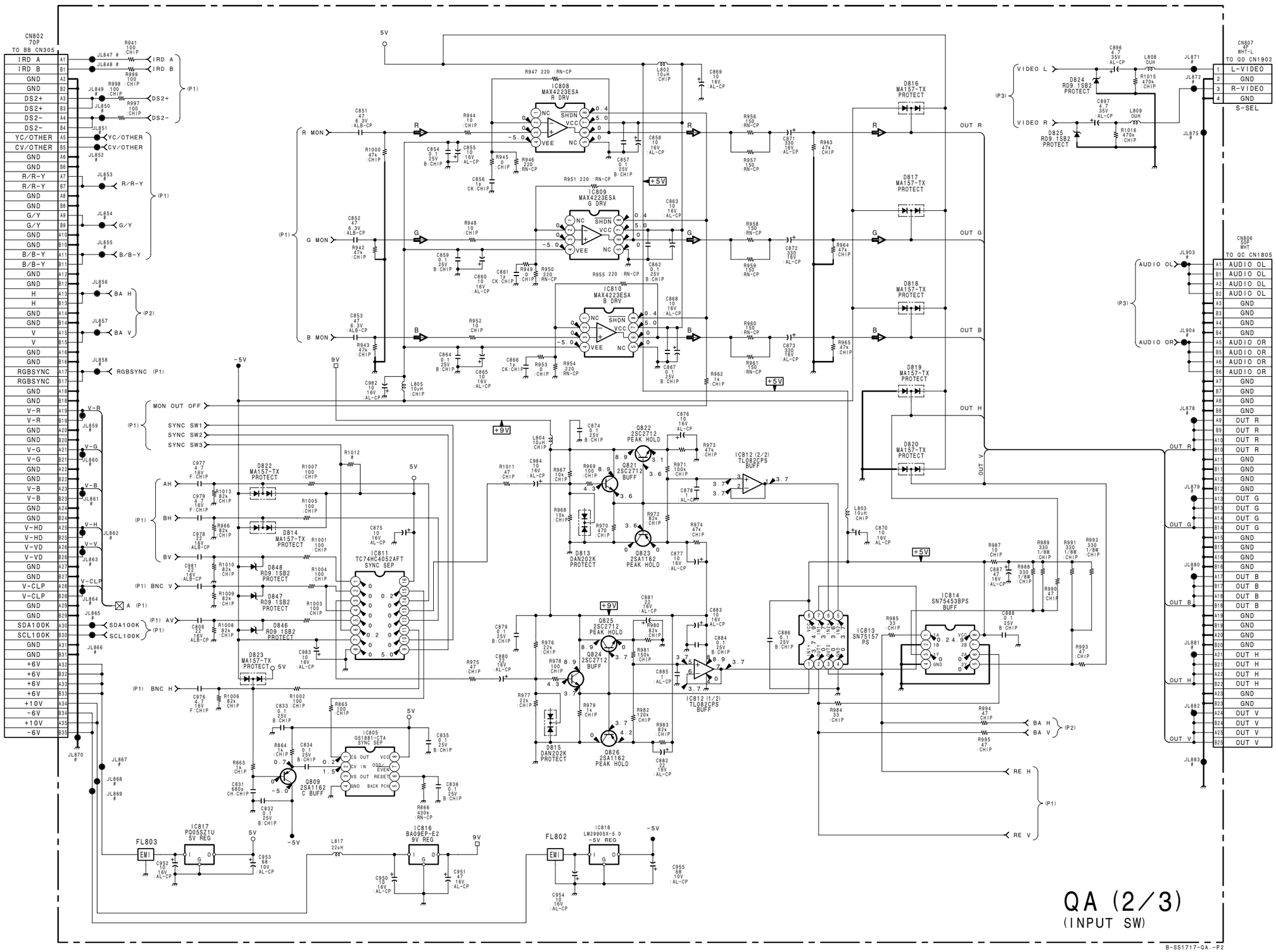
SUFFIX ; -11

- Refer to page 8-5 for Printed Wiring Board
- Refer to page 8-9 for IC Block Diagrams

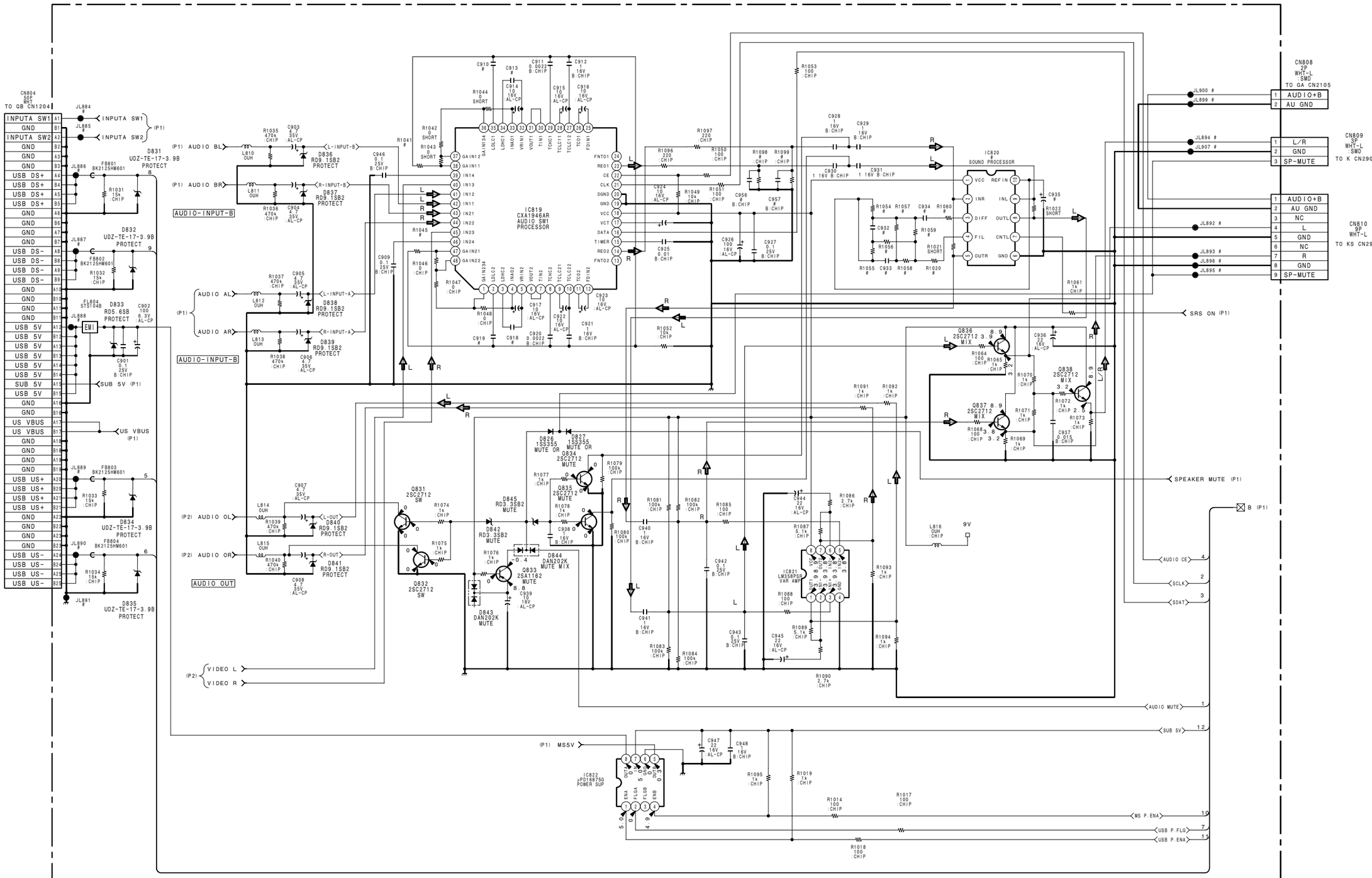
QA Board Waveforms



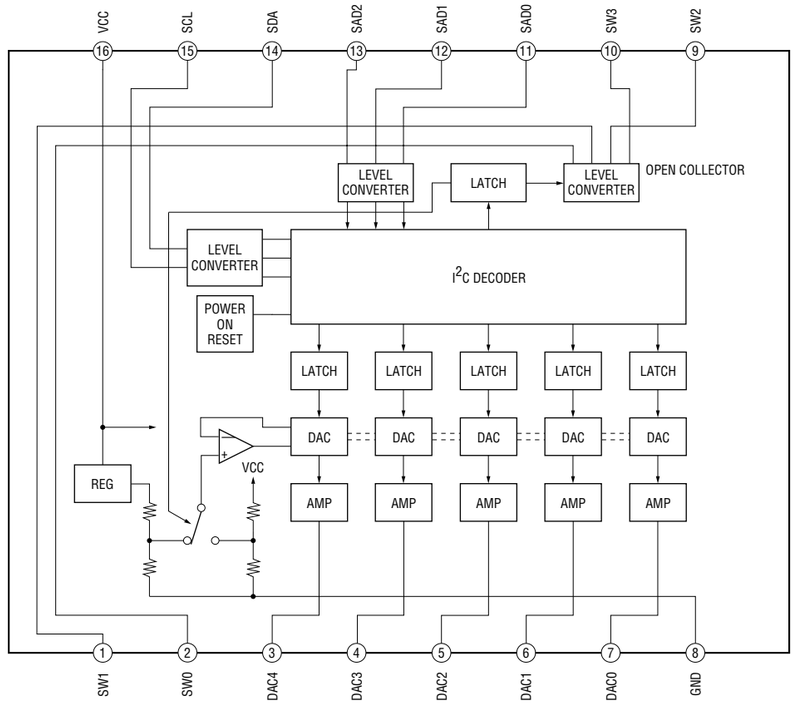
- Refer to page 8-5 for Printed Wiring Board
- Refer to page 8-9 for IC Block Diagrams



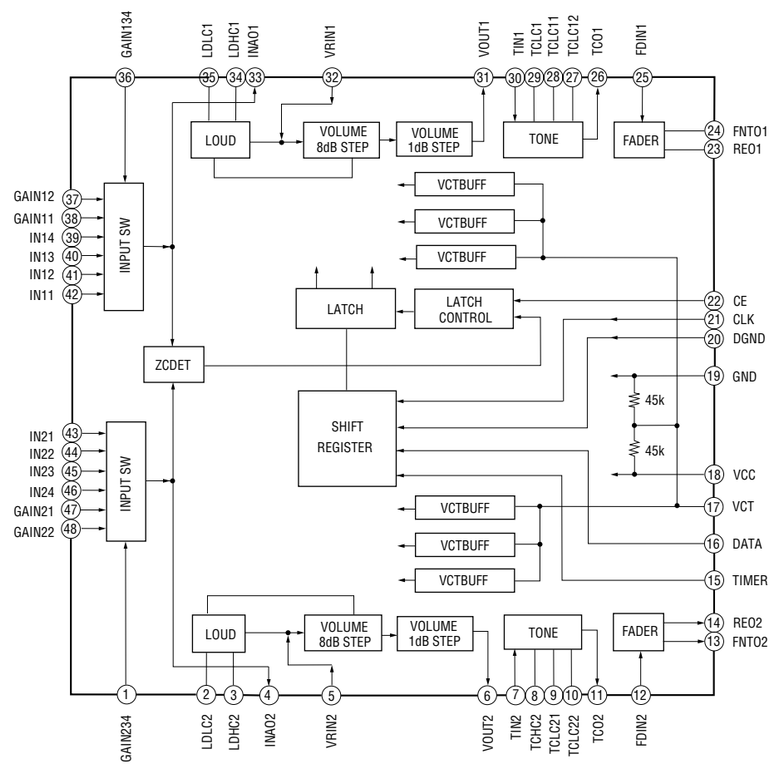
- Refer to page 8-5 for Printed Wiring Board
- Refer to page 8-9 for IC Block Diagrams



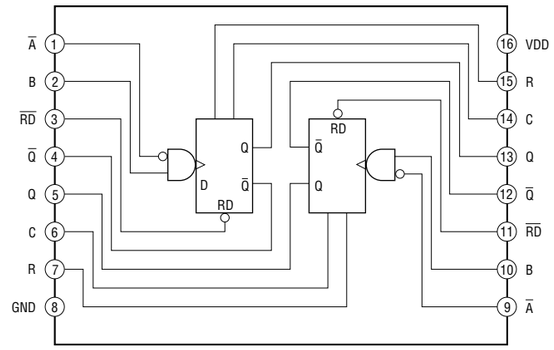
CXA1875AM-T4 (IC806, IC807)



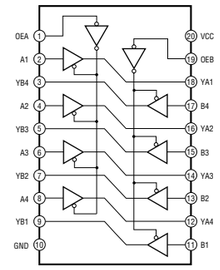
CXA1946AR (IC819)



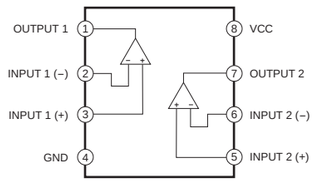
TC74VHC123AF (EL) (IC804)



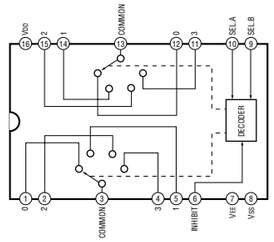
TC74VHC244F (EL) (IC803)



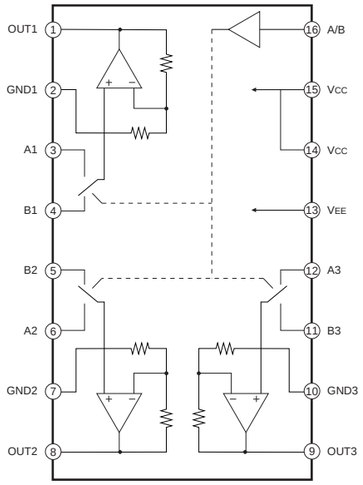
LM358PSR (IC821)



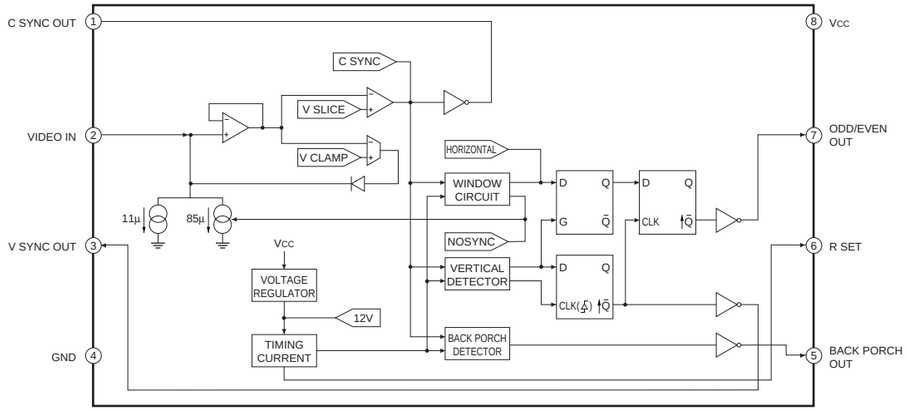
MC75HC4052AFT (EL) (IC811)



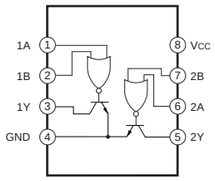
EL4332CS-TE2 (IC801)



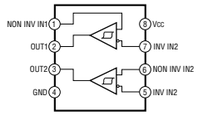
GS1881-CTA (IC805)

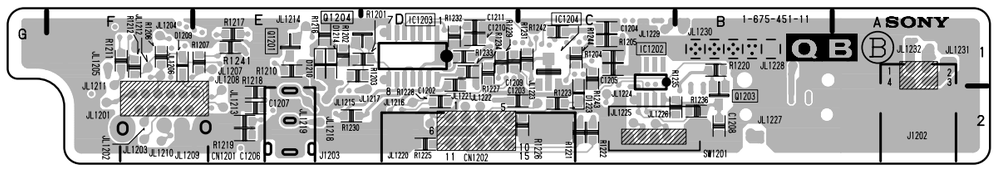


SN75453BPSR (IC814)



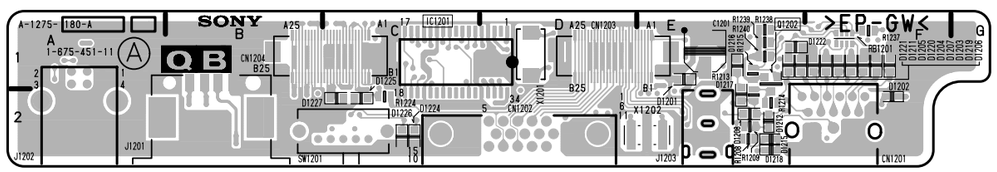
SN75157PS-ELL2000 (IC813)





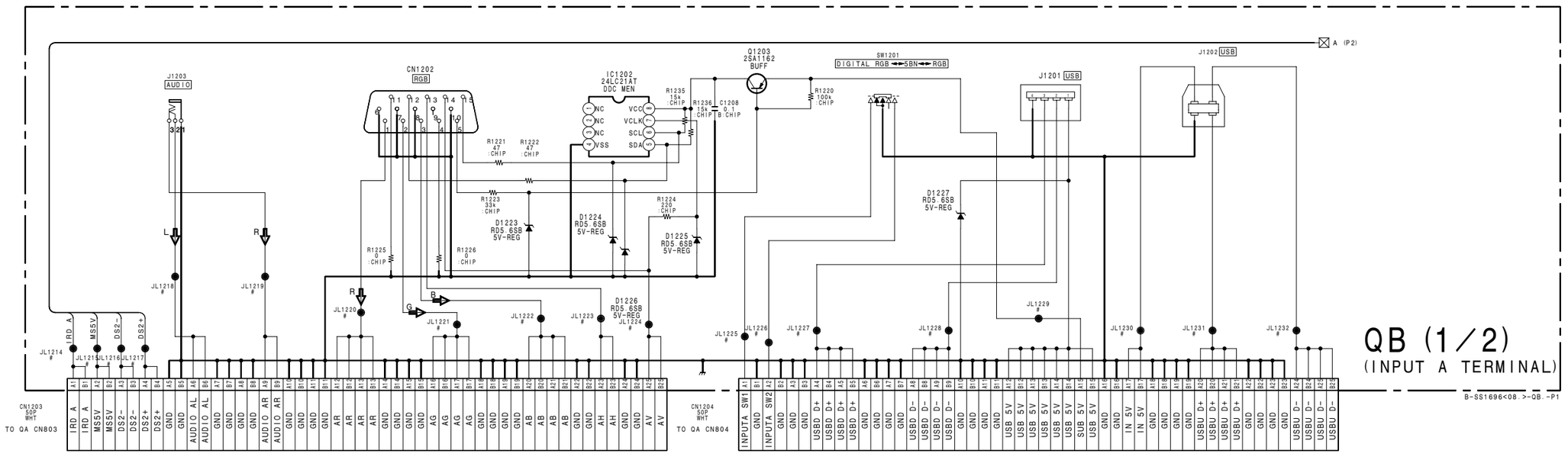
QB – B SIDE –

SUFFIX ; -11



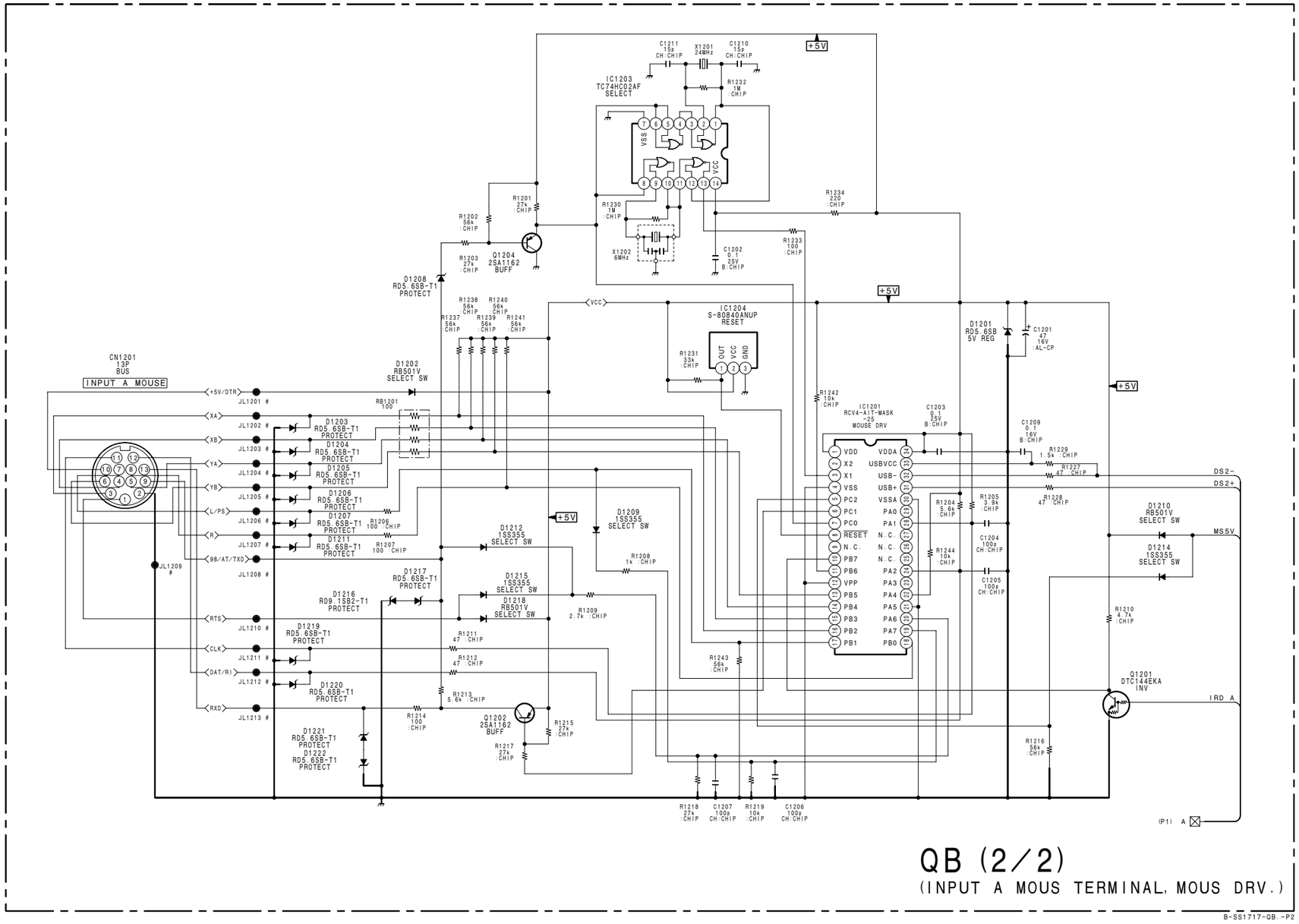
QB – A SIDE –

SUFFIX ; -11



http://getMANUAL.com

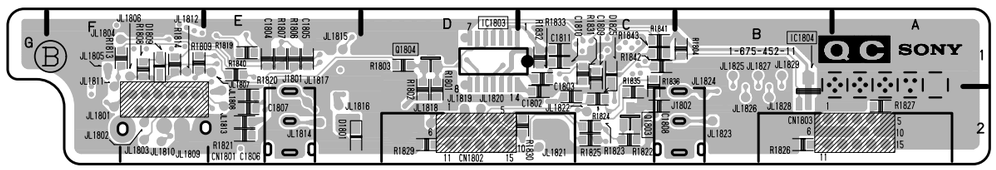
• Refer to page 8-10 for Printed Wiring Board



QB (2/2)

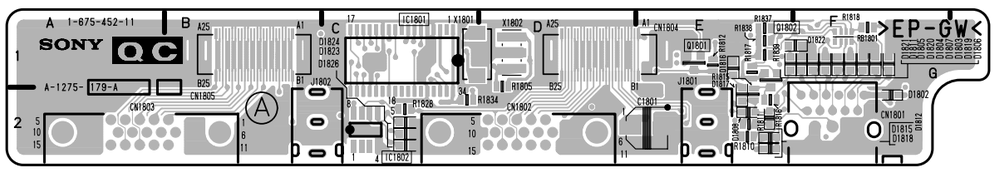
(INPUT A MOUS TERMINAL, MOUS DRV.)

B-SS1717-QB.-P2



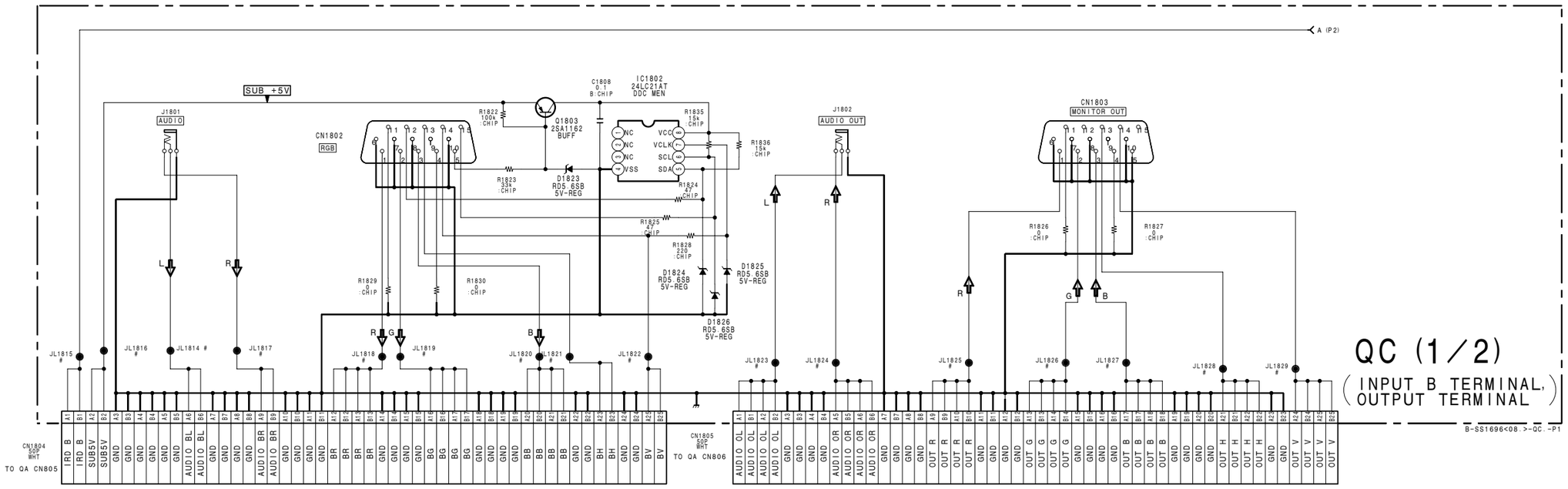
QC – B SIDE –

SUFFIX ; -11



QC – A SIDE –

SUFFIX ; -11

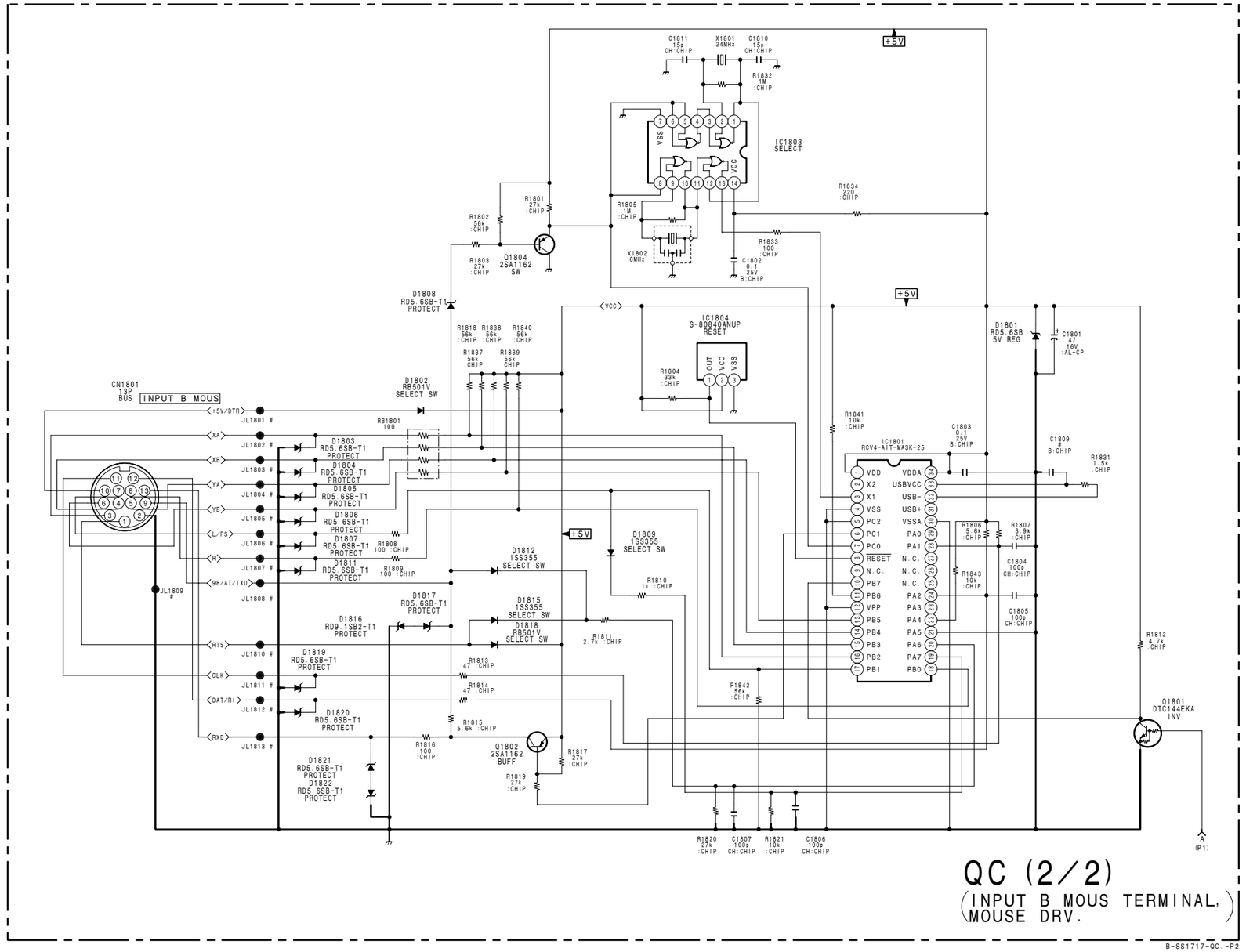


8-12 8-12

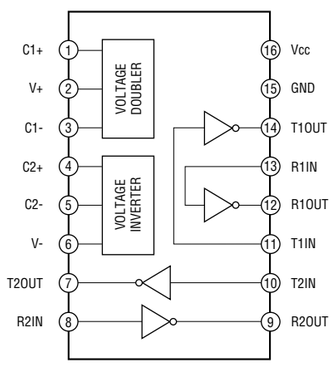
VPL-PX21/PX31

A B C D E F G H

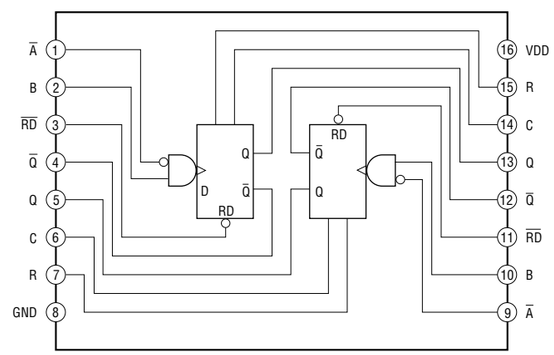
• Refer to page 8-12 for Printed Wiring Board

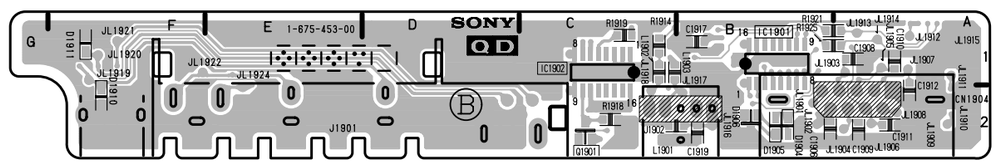


MAX202 (IC1901)



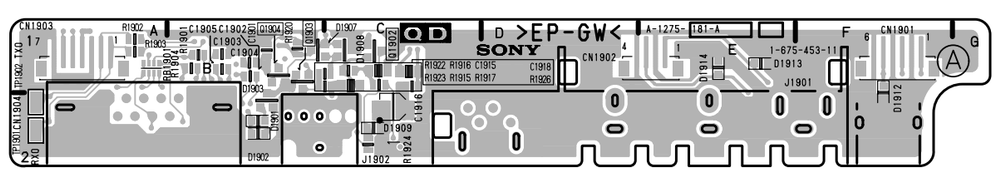
PC74HC123D (IC1902)





QD – B SIDE –

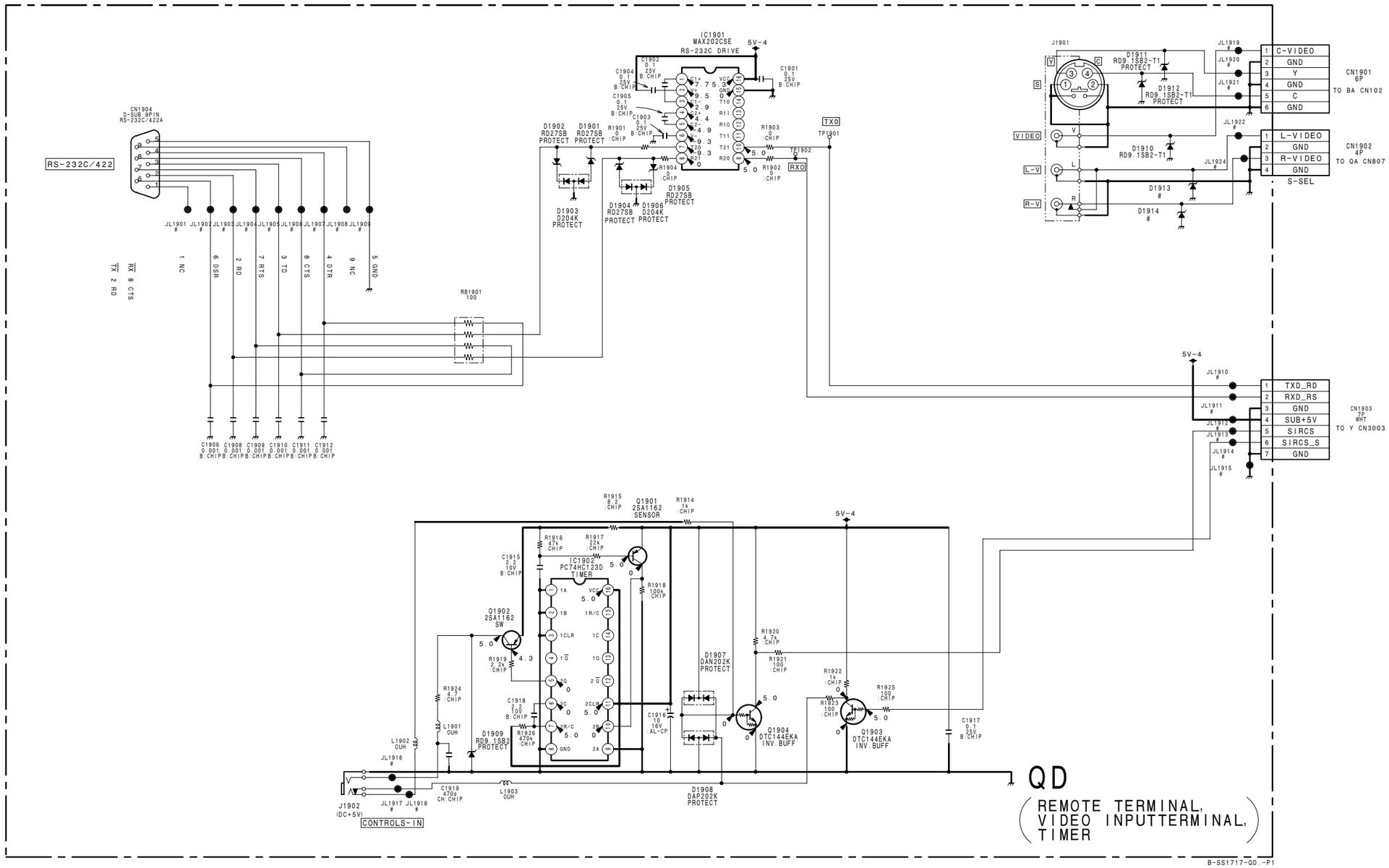
SUFFIX ; -11



QD – A SIDE –

SUFFIX ; -11

- Refer to page 8-14 for Printed Wiring Board
- Refer to page 8-14 for IC Block Diagrams



BA

1-675-454-12

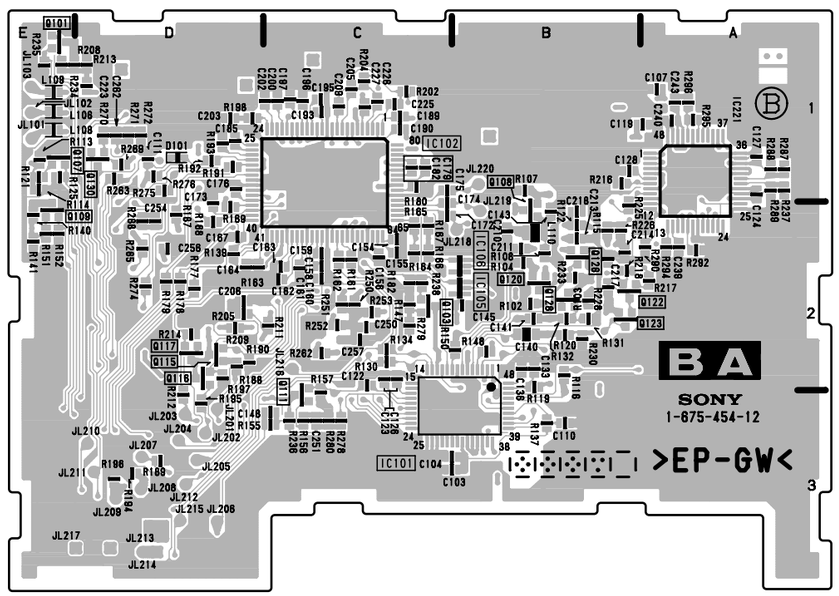
IC101 * B-3
IC102 * C-1
IC103 D-2
IC105 * B-2
IC106 * B-2
IC221 * A-1
IC250 C-2
IC251 C-2
IC252 C-2
IC253 C-2
IC254 D-2
IC255 D-1
IC256 D-2
IC257 D-2
IC258 C-1
IC259 D-1

Q101 * E-1
Q103 * C-2
Q107 * E-1
Q108 * B-2
Q109 * E-2
Q110 D-2
Q111 * C-3
Q112 C-2
Q113 D-2
Q114 D-2
Q115 * D-2
Q116 * D-2
Q117 * D-2
Q118 C-2
Q119 C-2
Q120 * B-2
Q121 B-2
Q122 * B-2
Q123 * B-2
Q124 B-2
Q125 B-2
Q126 * B-2
Q127 B-2
Q128 * B-2
Q129 D-2
Q130 * D-1

R201 A-2
R215 B-2

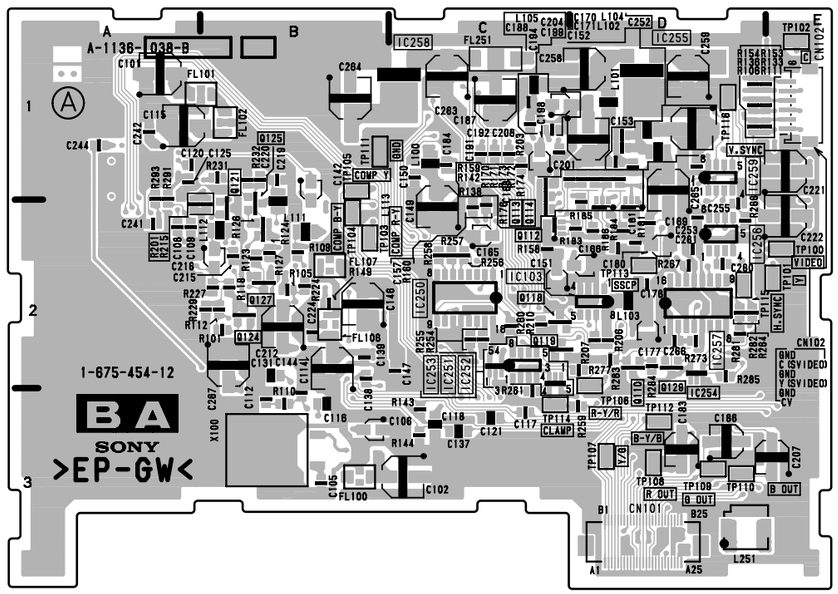
TP100 E-2
TP101 E-2
TP102 E-1
TP103 B-2
TP104 B-2
TP105 B-1
TP106 D-2
TP107 D-3
TP108 D-3
TP109 D-3
TP110 D-3
TP111 B-1
TP112 D-3
TP113 D-2
TP114 C-3
TP115 D-2
TP116 D-1

*:B Side mount



BA – B SIDE –

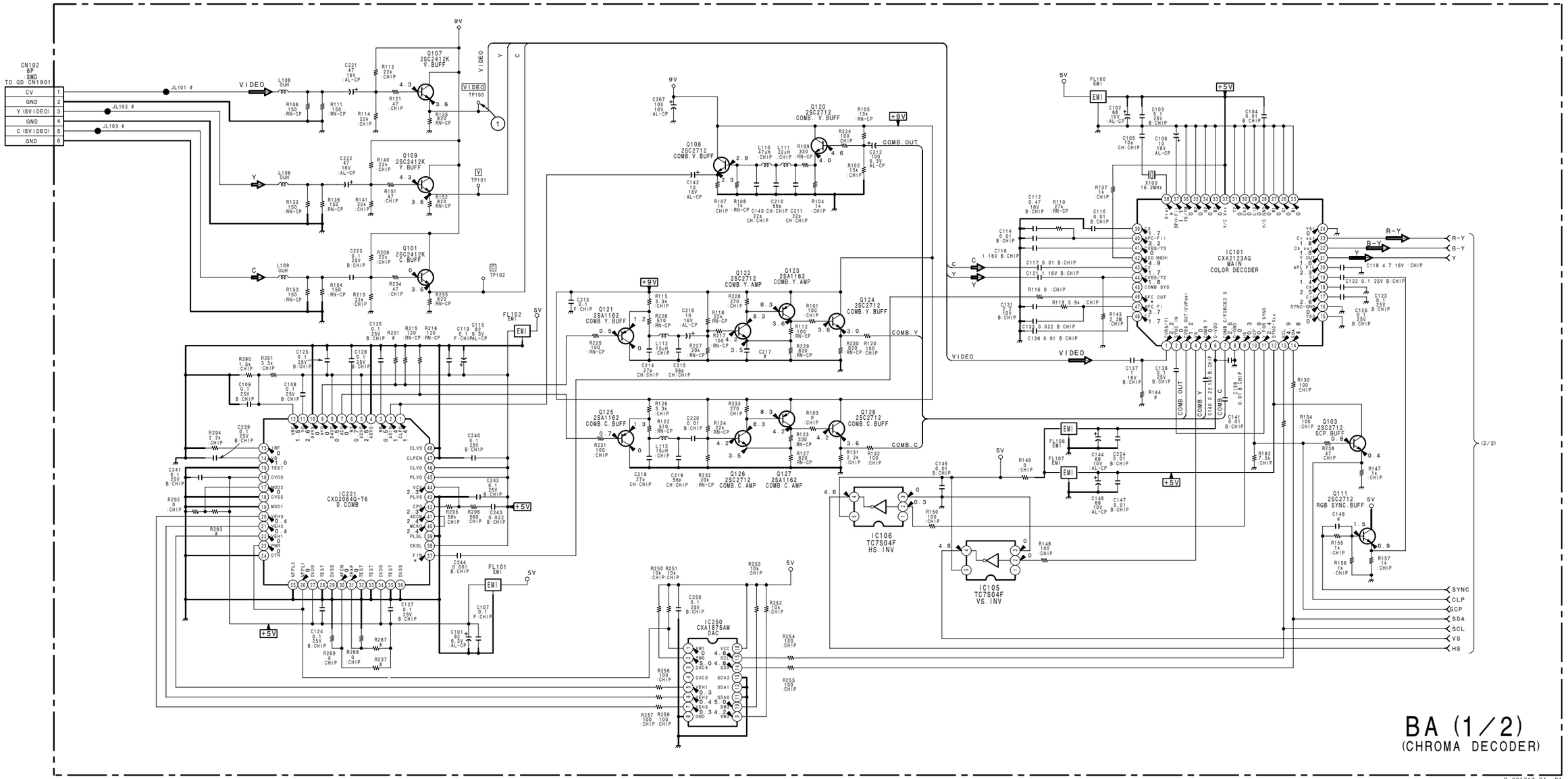
SUFFIX ; -12



BA– A SIDE –

SUFFIX ; -12

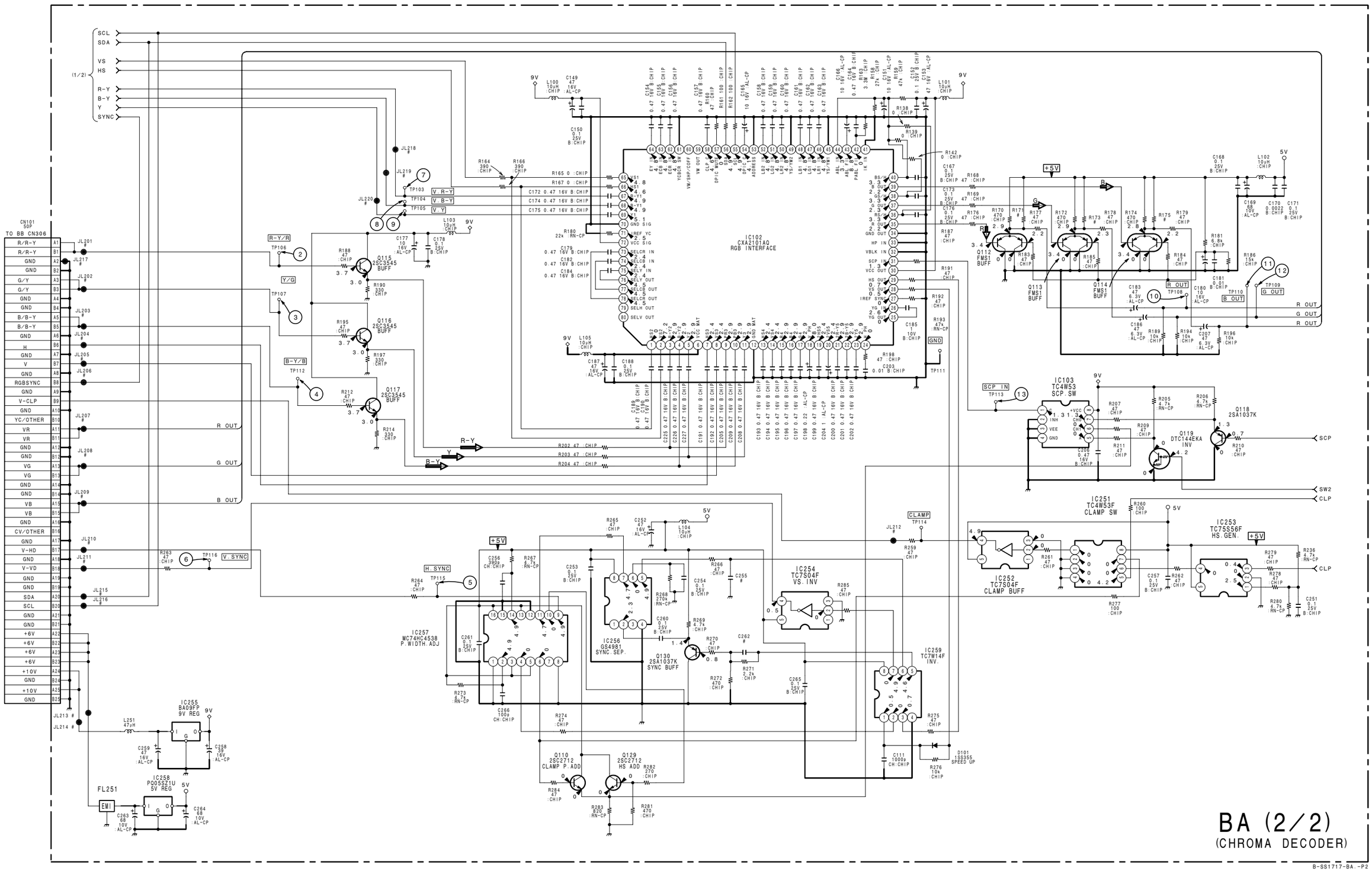
- Refer to page 8-16 for Printed Wiring Board
- Refer to page 8-19 for Waveforms
- Refer to page 8-19 for IC Block Diagrams



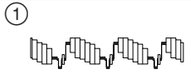
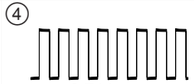
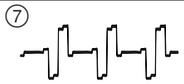
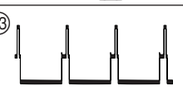
BA (1/2)
(CHROMA DECODER)

B-SS1717-BA.-P1

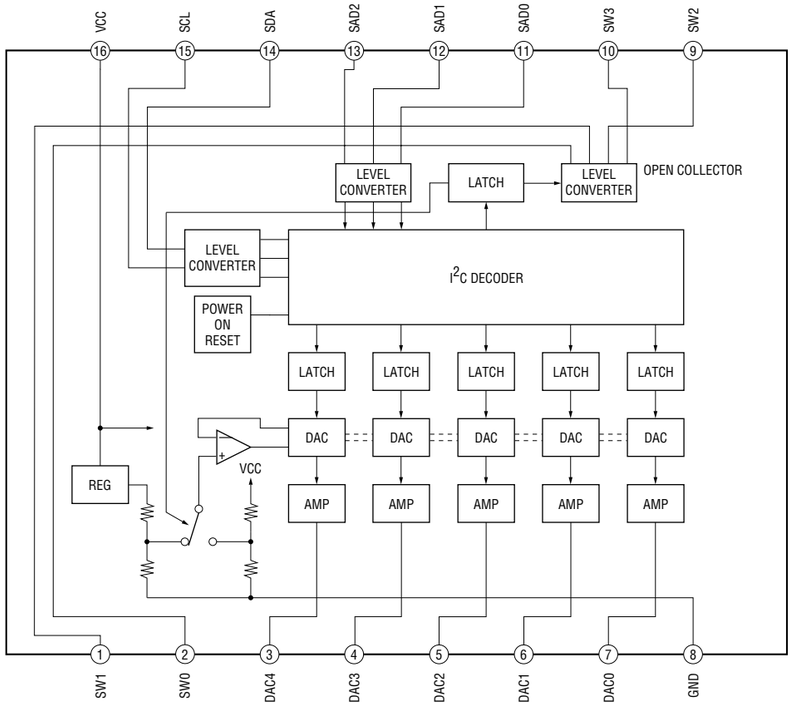
- Refer to page 8-16 for Printed Wiring Board
- Refer to page 8-19 for Waveforms
- Refer to page 8-19 for IC Block Diagrams



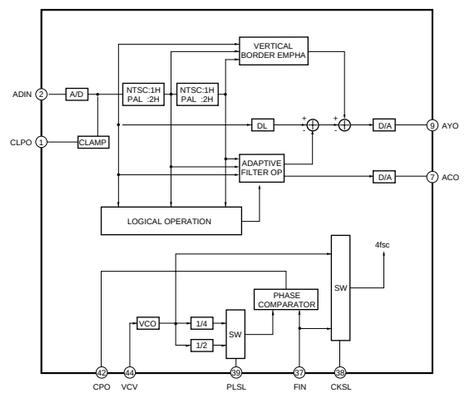
BA Board Waveforms

①  1.0 Vp-p TP100 VIDEO	② 0.7 Vp-p TP106 R-Y/R	③ 0.7 Vp-p TP107 Y/G	④  0.7 Vp-p TP112 B-Y/B
⑤ 5.0 Vp-p TP115 H.SYNC	⑥ 3.8 Vp-p TP116 V.SYNC	⑦  0.7 Vp-p TP103 R-Y	⑧ 0.7 Vp-p TP104 B-Y
⑨ 0.6 Vp-p TP105 Y	⑩ 0.6 Vp-p TP108 R OUT	⑪ 0.6 Vp-p TP110 B OUT	⑫ 0.6 Vp-p TP109 G OUT
⑬  3.8 Vp-p TP113 SCP IN			

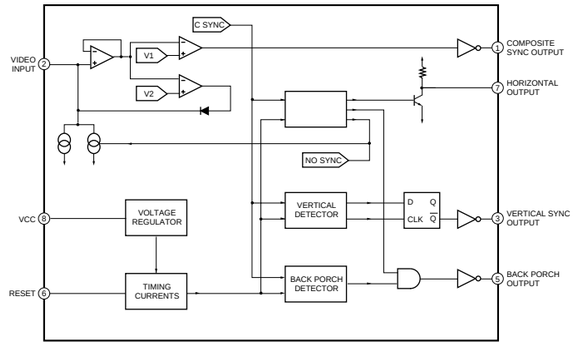
CXA1875AM-T4 (IC250)



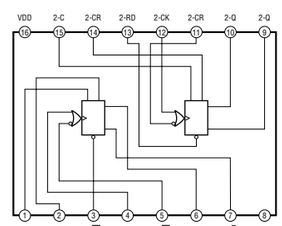
CXD2064Q-T6 (IC221)



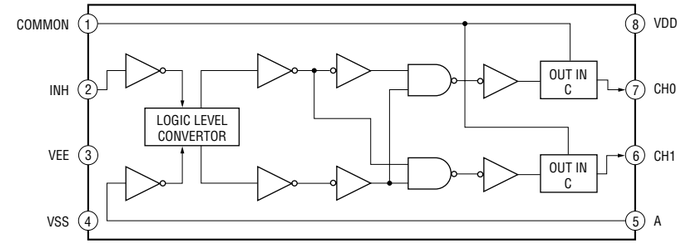
GS4981 (IC256)



MC74HC4538AFEL (IC257)



TC4W53F (TE12R) (IC251, 103)



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BB
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1-675-458-11

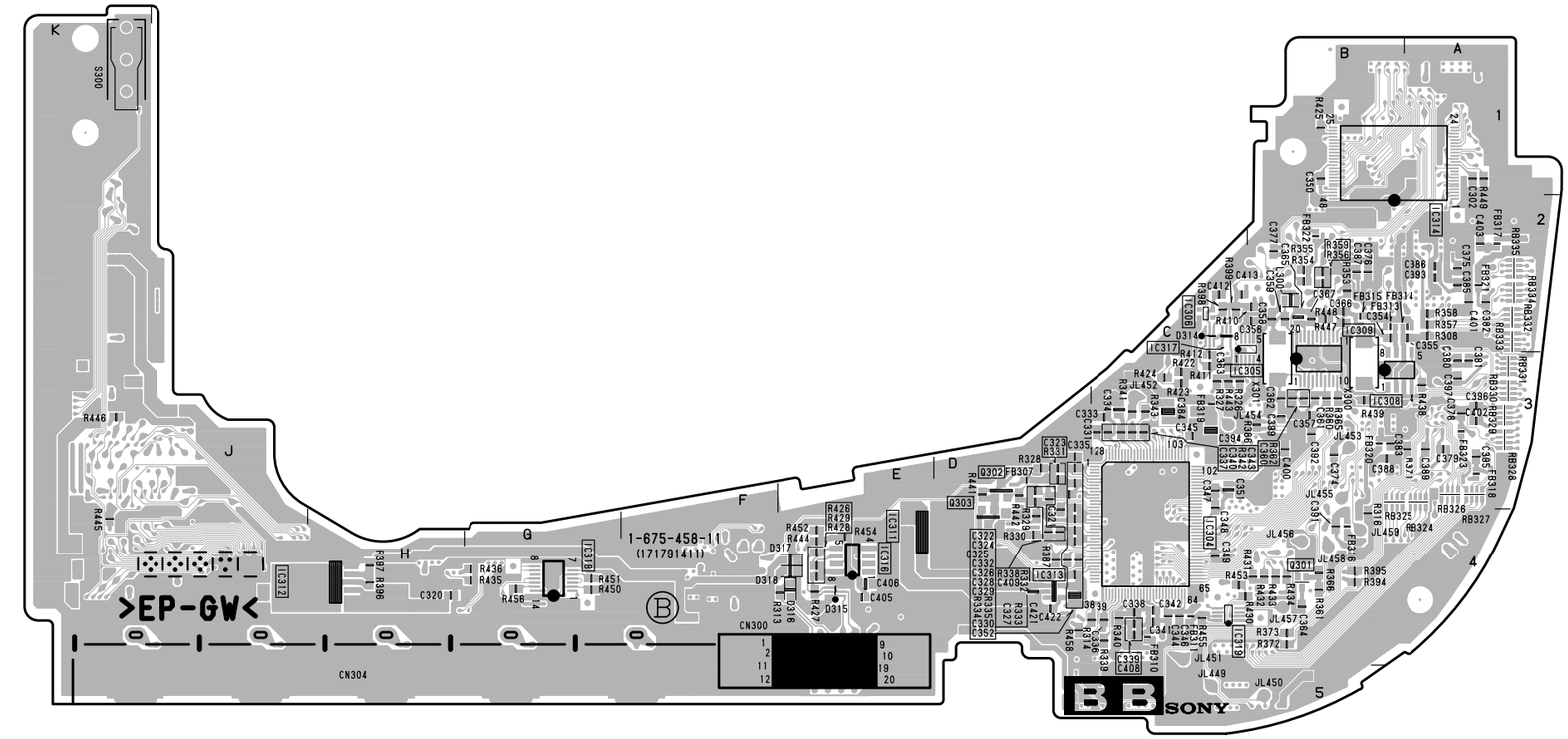
C322 ＊D-4
C323 ＊D-3
C324 ＊D-4
C325 ＊D-4
C326 ＊D-4
C327 ＊D-4
C328 ＊D-4
C329 ＊D-4
C330 ＊D-4
C332 ＊D-4
C337 ＊C-3
C339 ＊C-4
C340 ＊C-3
C343 ＊B-3
C352 ＊D-4
C408 ＊C-5
C409 ＊D-4

IC300 C-3
IC301 H-4
IC302 B-4
IC303 A-2
IC304 ＊C-4
IC305 ＊B-3
IC306 ＊C-2
IC307 C-2
IC308 ＊B-3
IC309 ＊B-2
IC310 B-4
IC311 ＊E-4
IC312 ＊J-4
IC313 ＊D-4
IC314 ＊A-2
IC315 A-1
IC316 ＊E-4
IC317 ＊C-2
IC318 ＊G-4
IC319 ＊C-4

Q301 ＊B-4
Q302 ＊D-3
Q303 ＊D-3

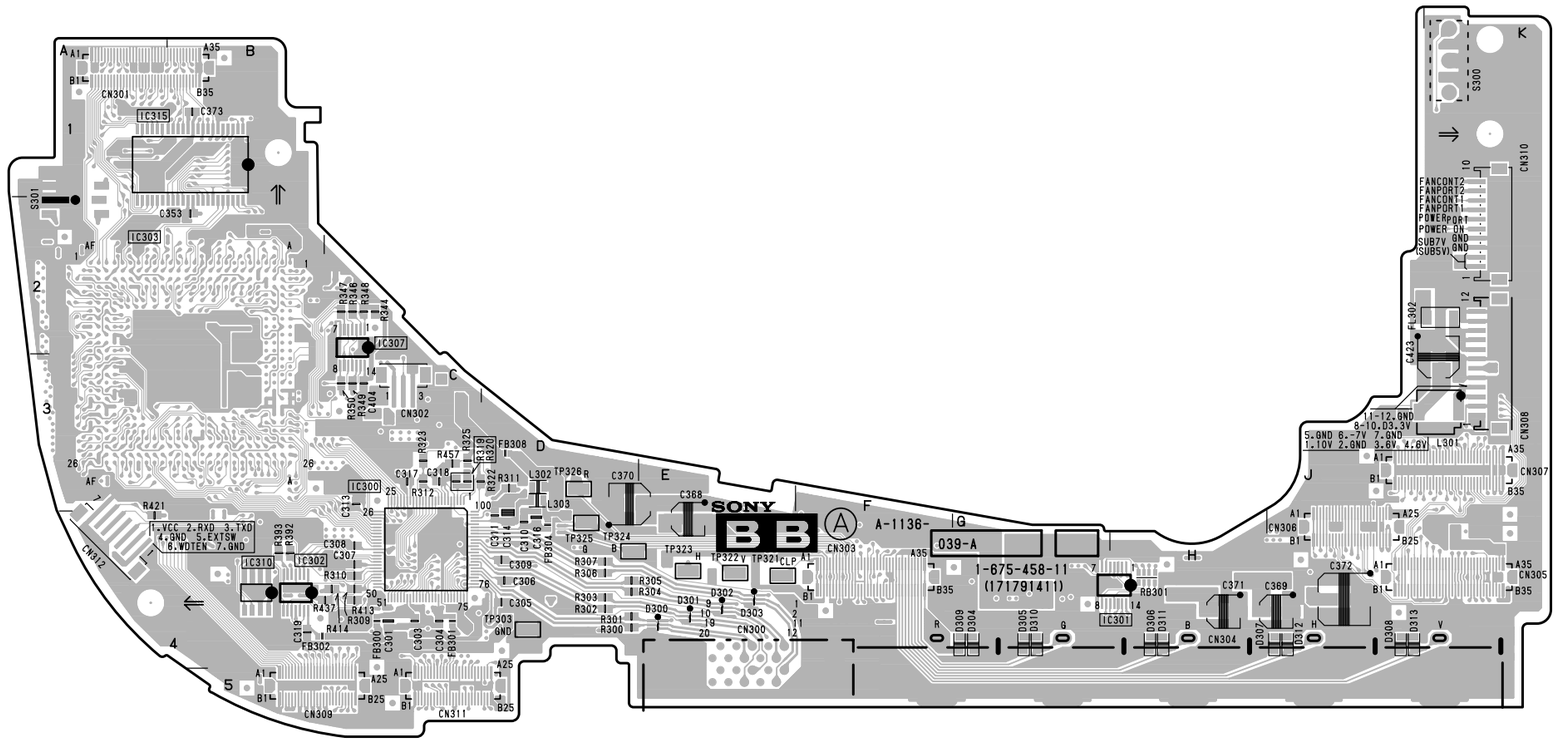
TP328 D-3
TP324 D-4
TP325 D-4
TP303 D-4
TP323 E-4
TP322 E-4
TP321 E-4

＊:B Side mount



BB – B SIDE –

SUFFIX ; -11



BB– A SIDE –

SUFFIX ; -11

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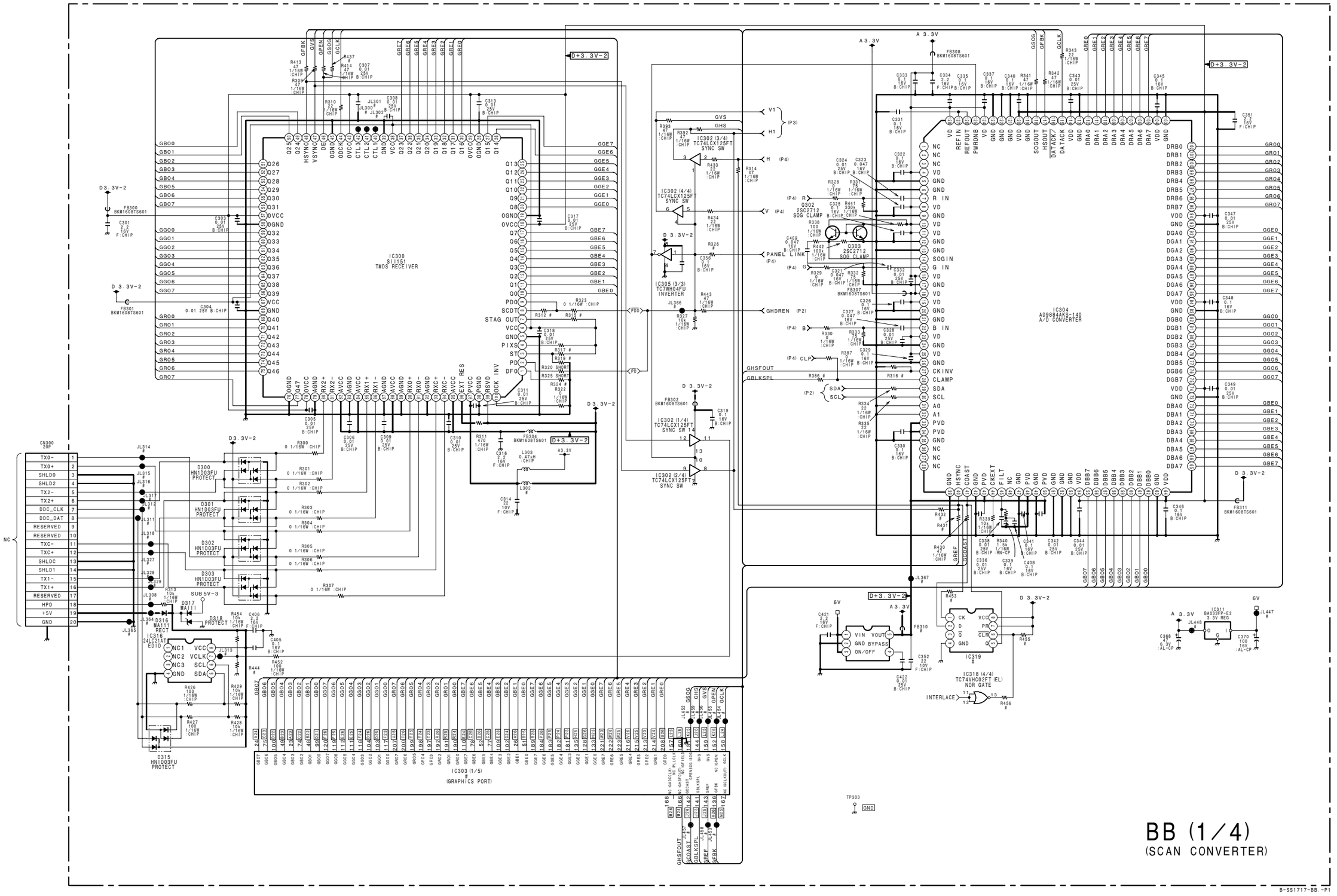
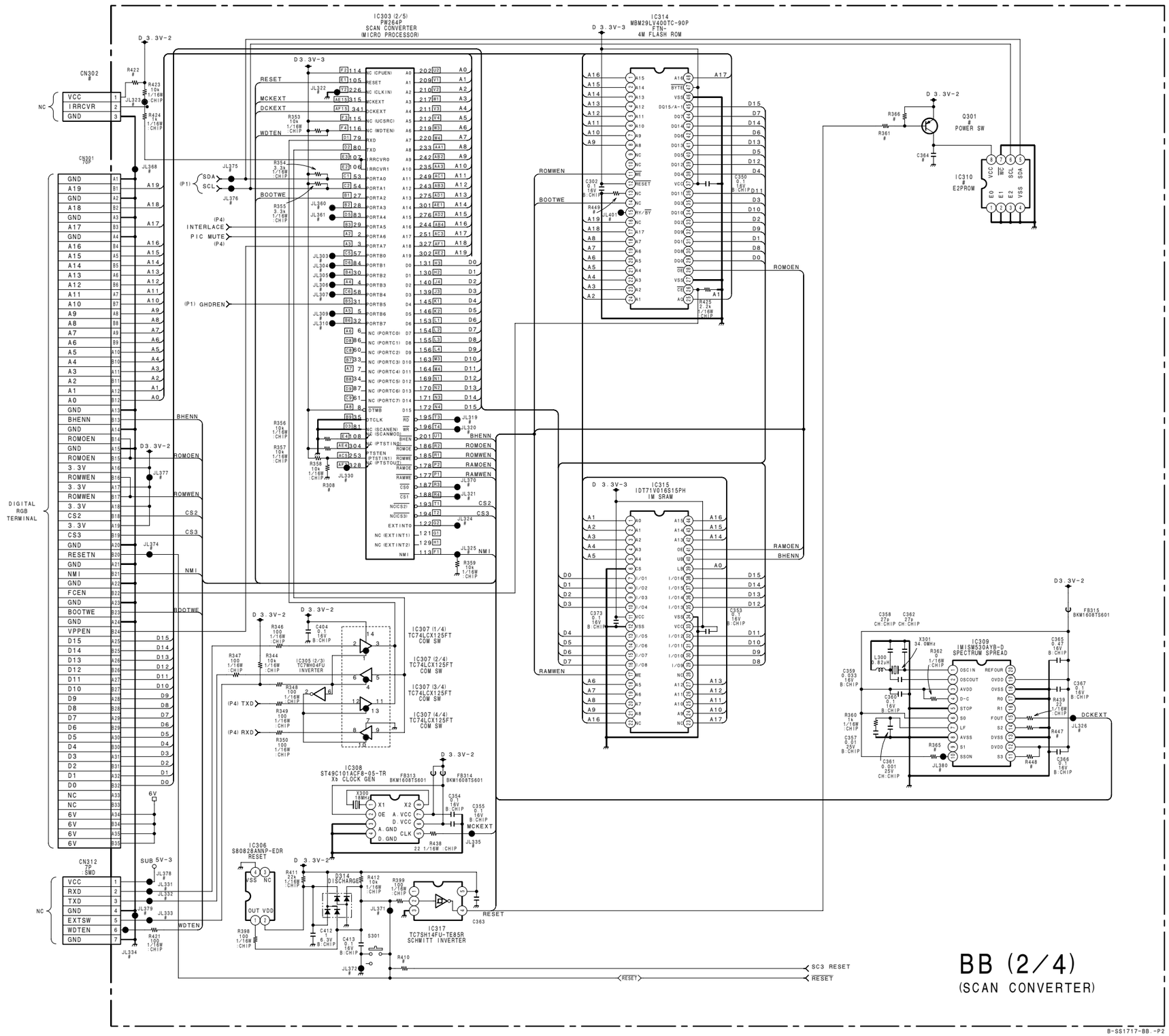
• Refer to page 8-20 for Printed Wiring Board

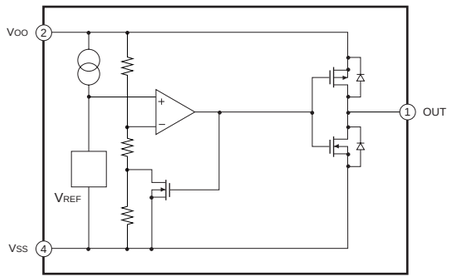


• Refer to page 8-20 for Printed Wiring Board

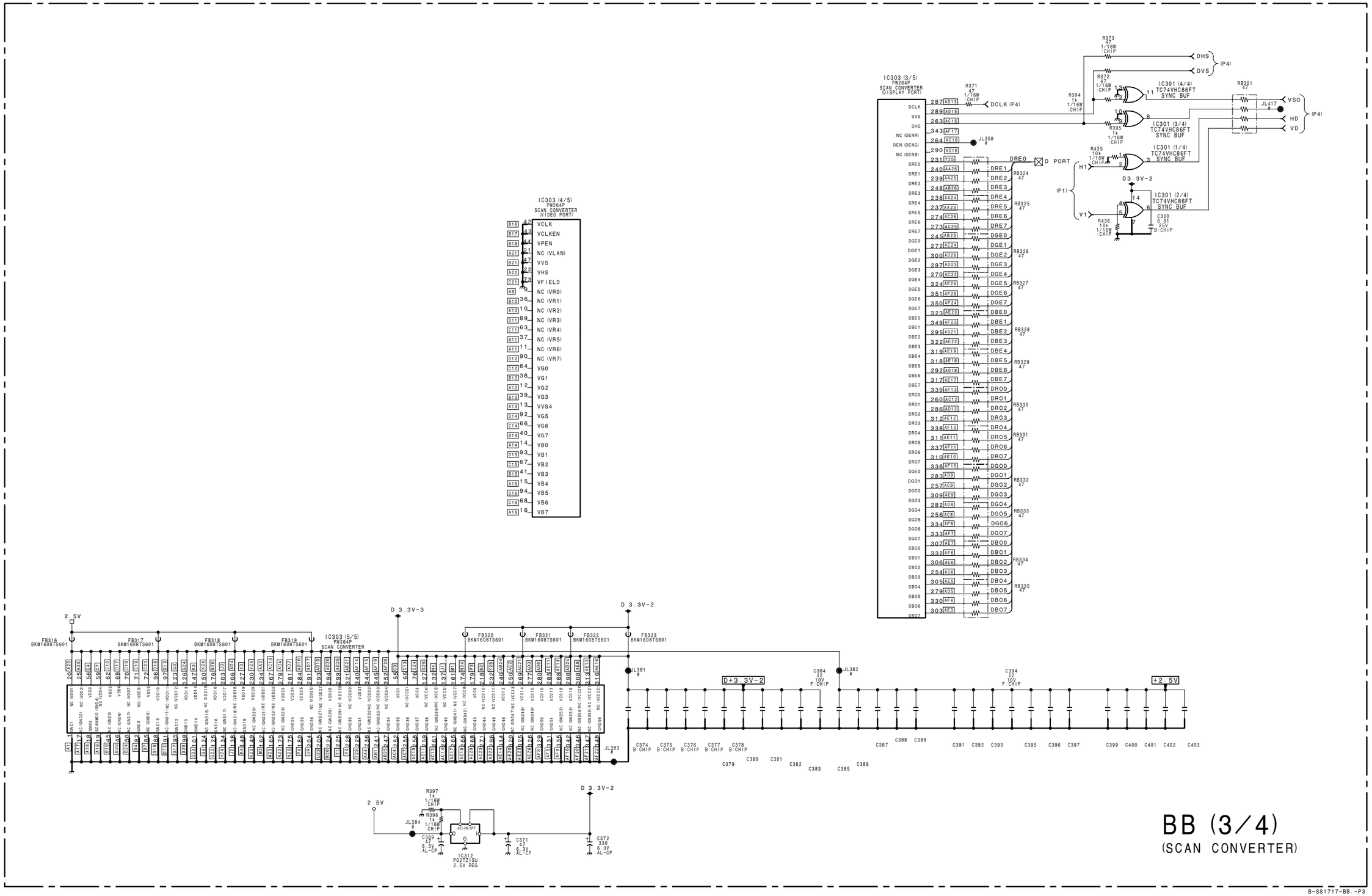


BB (2/4)
(SCAN CONVERTER)

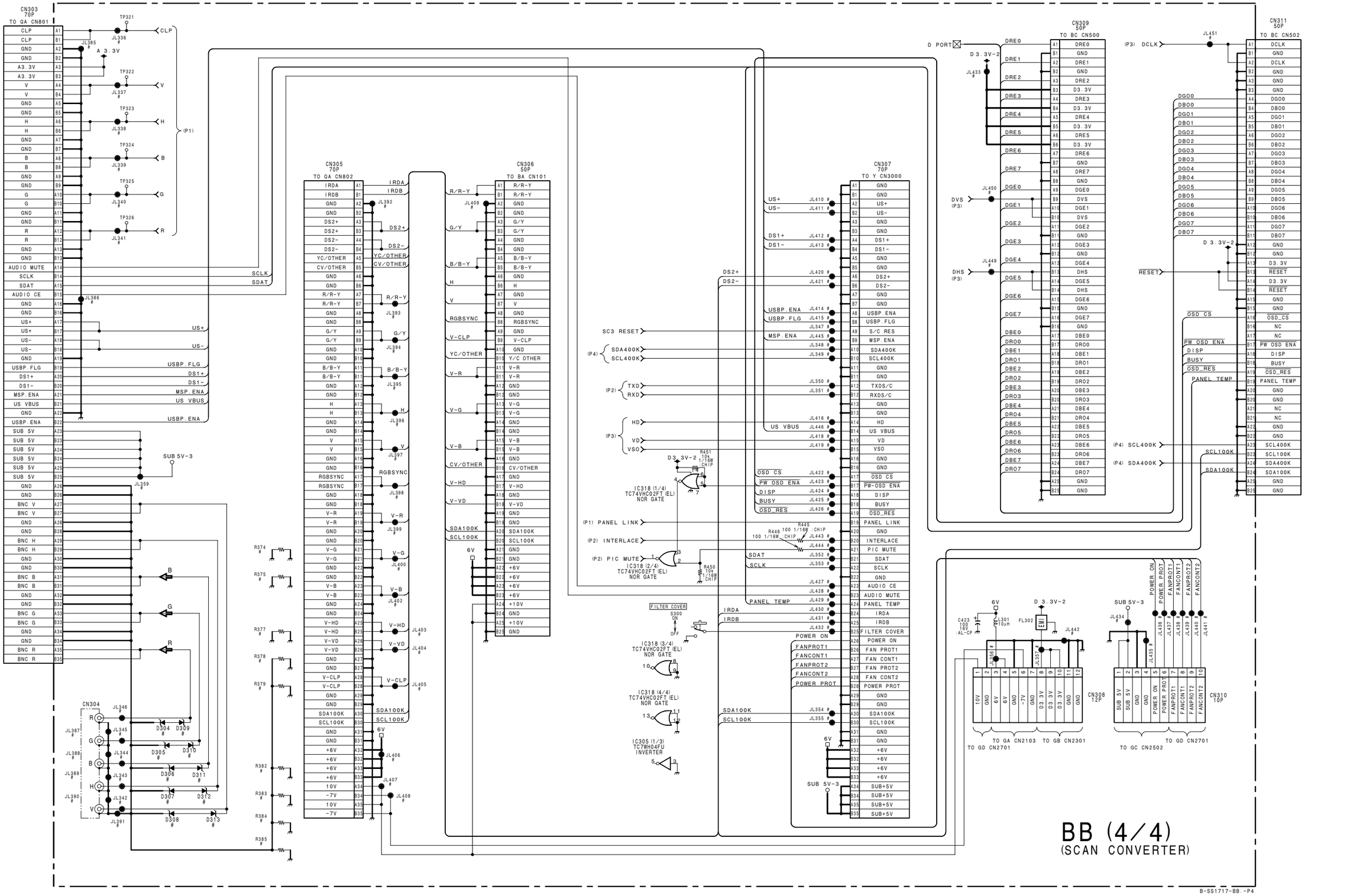
S-80828ANNP-ED4-T2 (IC306)

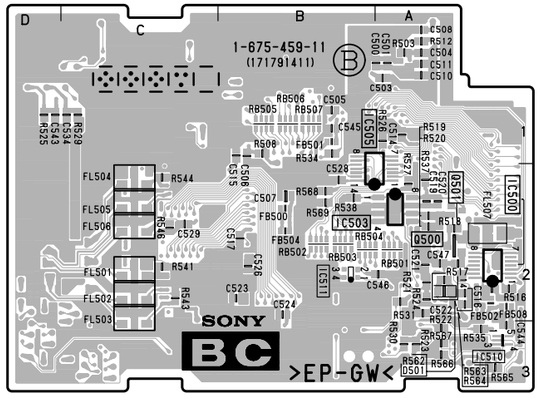


• Refer to page 8-20 for Printed Wiring Board



• Refer to page 8-20 for Printed Wiring Board





BC – B SIDE –

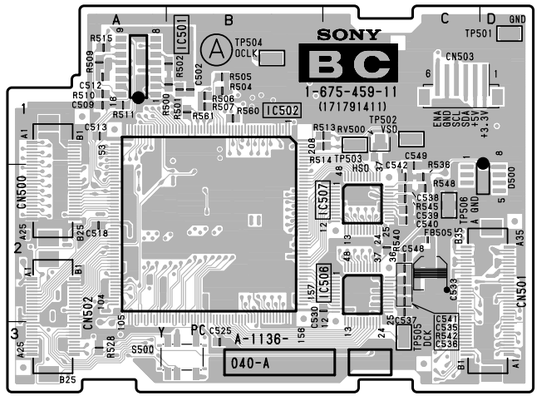
SUFFIX ; -11

BC

1-675-459-11

IC500	*	A-2
IC501		B-1
IC502		B-1
IC503	*	B-2
IC505	*	B-1
IC506		C-2
IC507		C-2
IC510	*	A-3
IC511	*	B-2
Q500	*	A-2
Q501	*	A-2
TP501		D-1
TP502		C-1
TP503		C-1
TP504		C-1
TP506		C-2
TP505		C-3

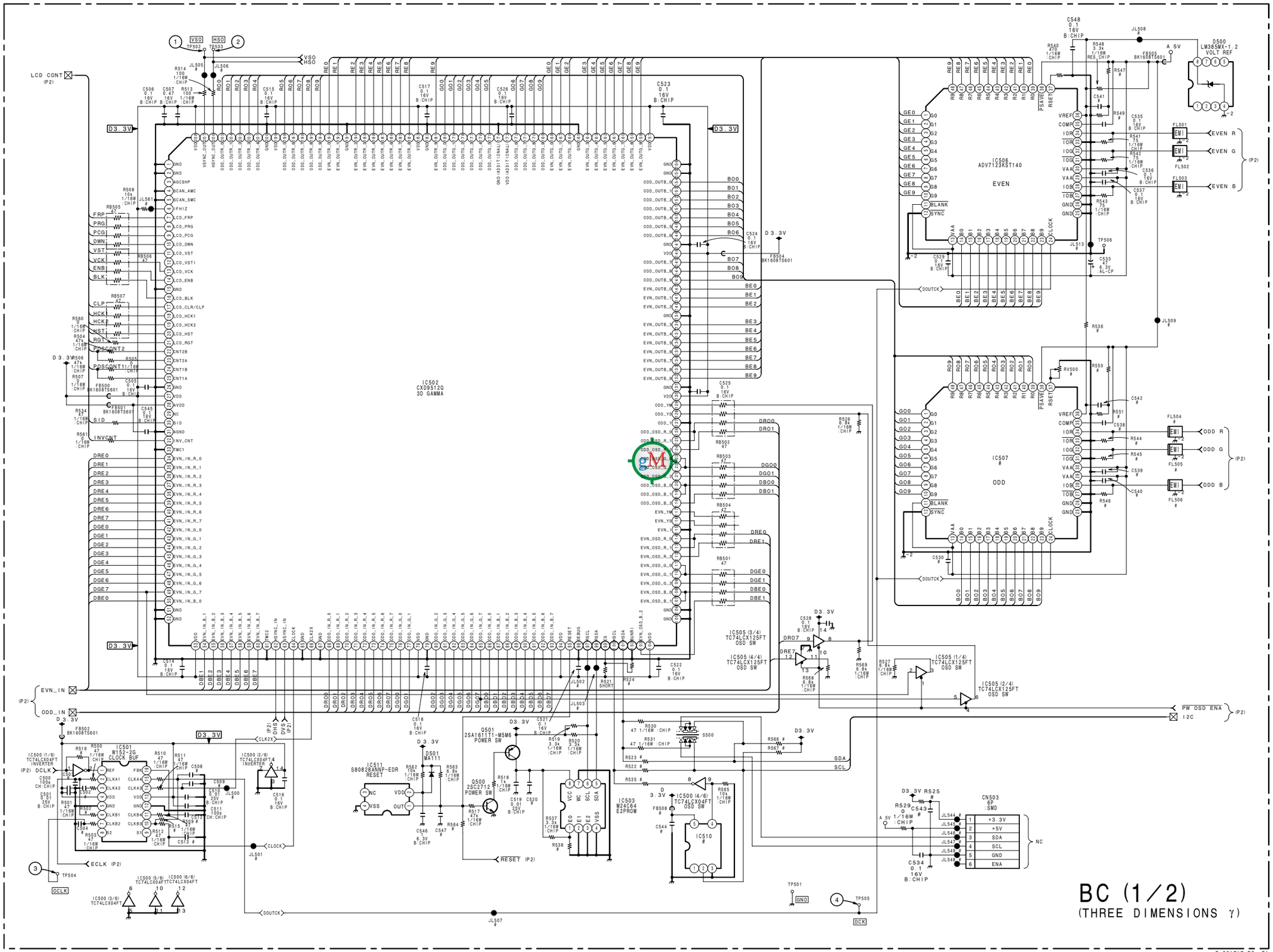
*:B Side mount



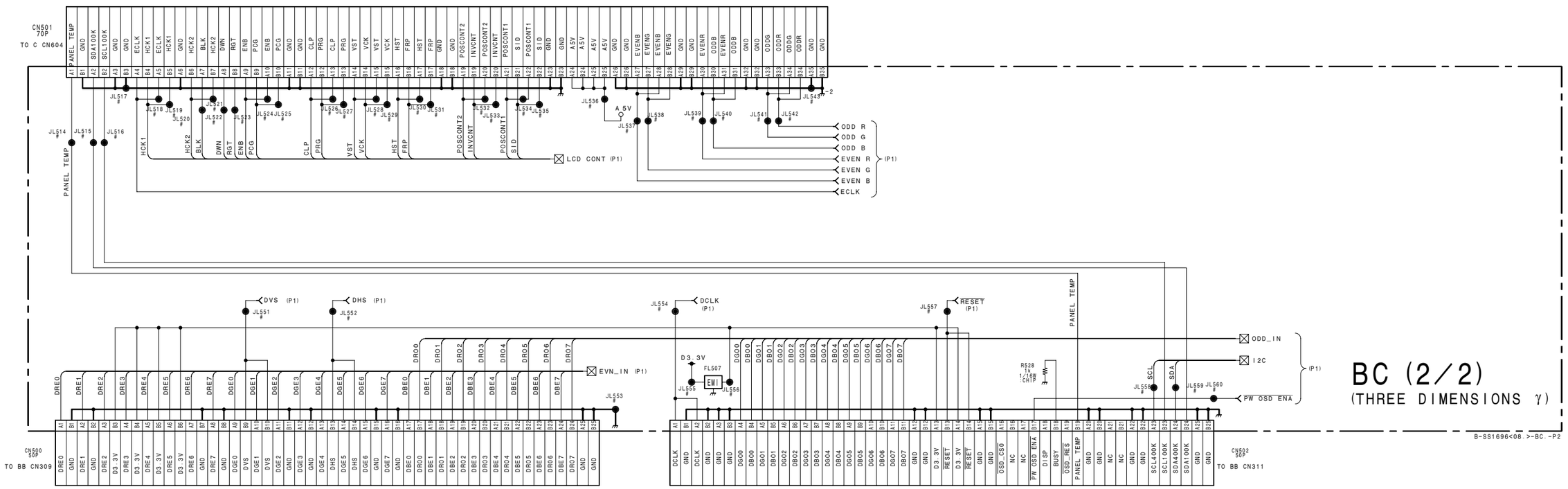
BC – A SIDE –

SUFFIX ; -11

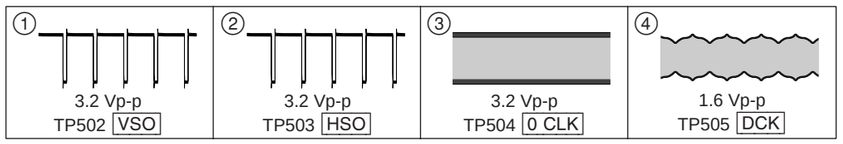
- Refer to page 8-25 for Printed Wiring Board
- Refer to page 8-27 for Waveforms



- Refer to page 8-25 for Printed Wiring Board
- Refer to page 8-27 for Waveforms



BC Board Waveforms



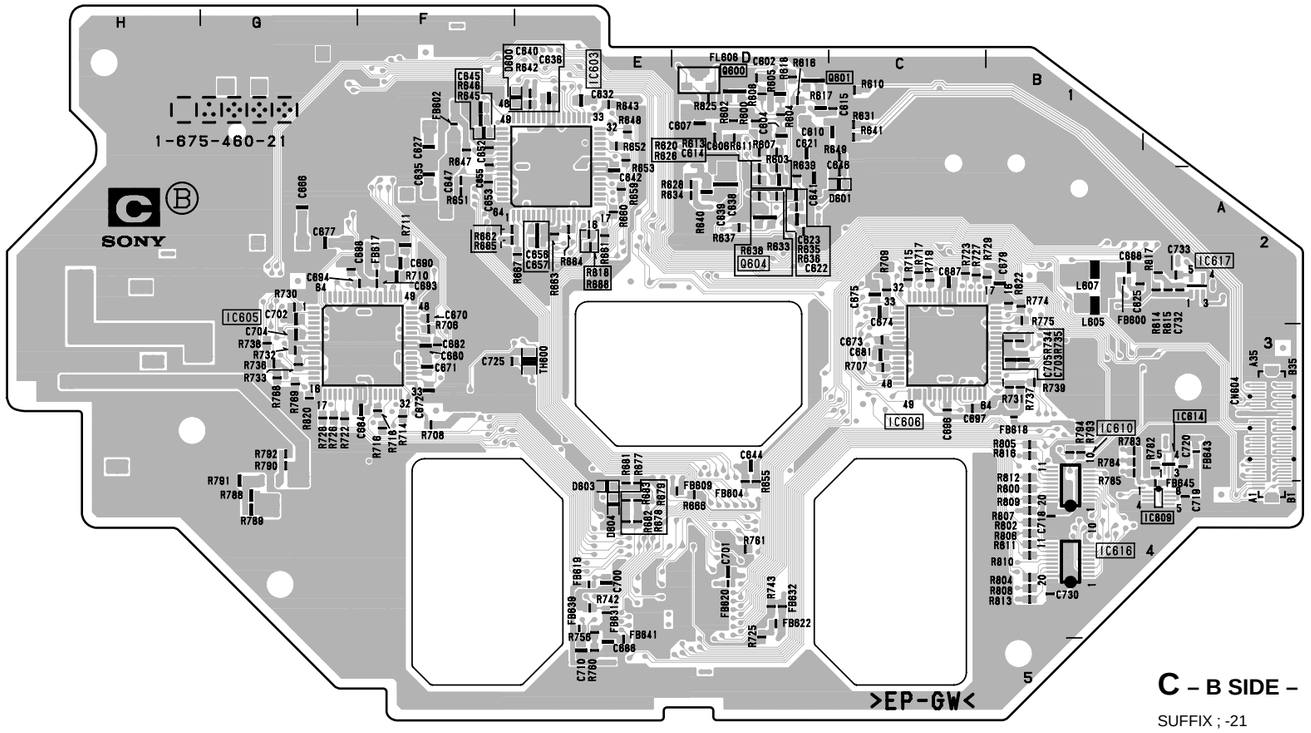
C
1-675-460-21

IC600 G-1
IC601 D-2
IC602 A-2
IC603 *E-1
IC604 E-1
IC605 *F-3
IC606 *C-3
IC607 F-3
IC608 C-3
IC609 *A-4
IC610 *B-4
IC611 G-3
IC612 B-3
IC613 H-3
IC614 *A-3
IC615 H-2
IC616 *B-4
IC617 *A-2

Q600 *D-1
Q601 *D-1
Q602 E-2
Q603 E-2
Q604 *D-2
Q605 D-2
Q606 G-3
Q607 B-3
Q608 F-3
Q609 B-3

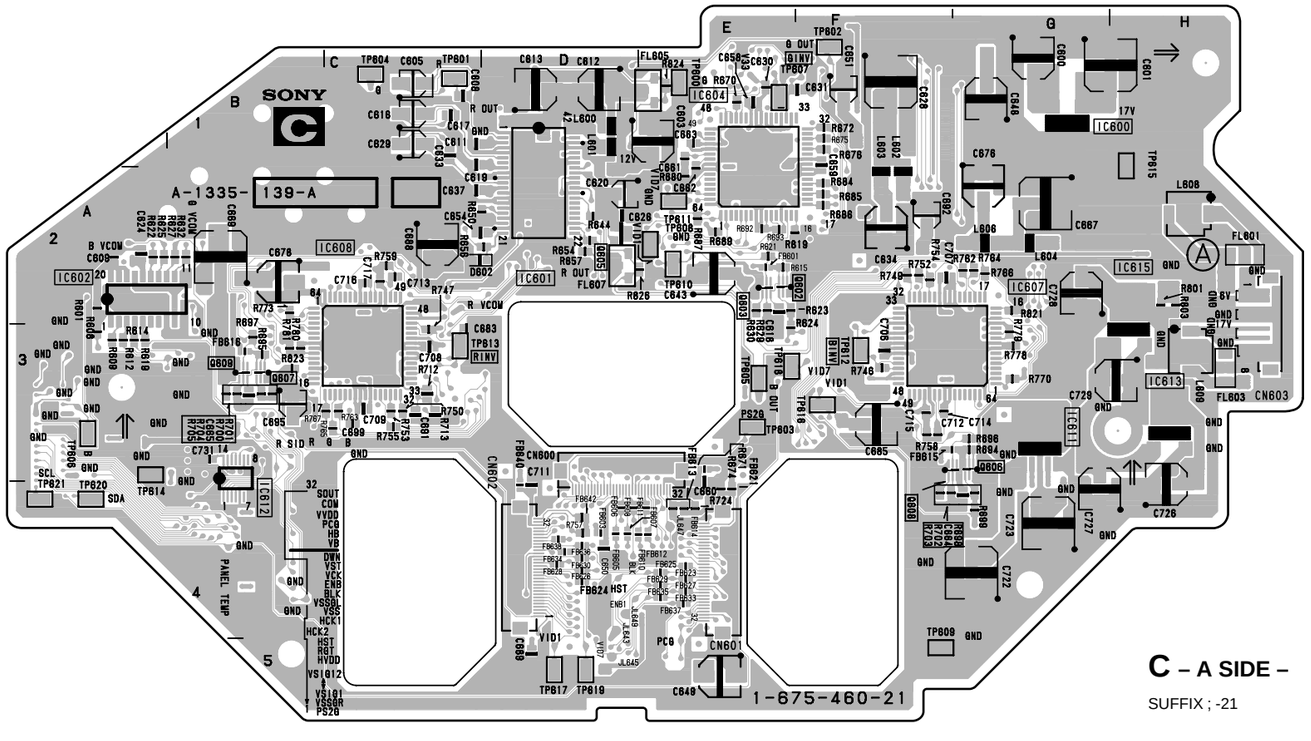
TP600 E-1
TP601 C-1
TP602 F-1
TP603 E-3
TP604 C-1
TP605 E-3
TP606 A-3
TP607 E-1
TP608 E-2
TP609 F-5
TP610 E-2
TP611 E-2
TP612 F-3
TP613 C-3
TP614 A-3
TP615 H-2
TP616 F-3
TP617 D-5
TP618 E-3
TP619 D-5
TP620 A-4
TP621 A-4

*:B Side mount



C – B SIDE –

SUFFIX ; -21



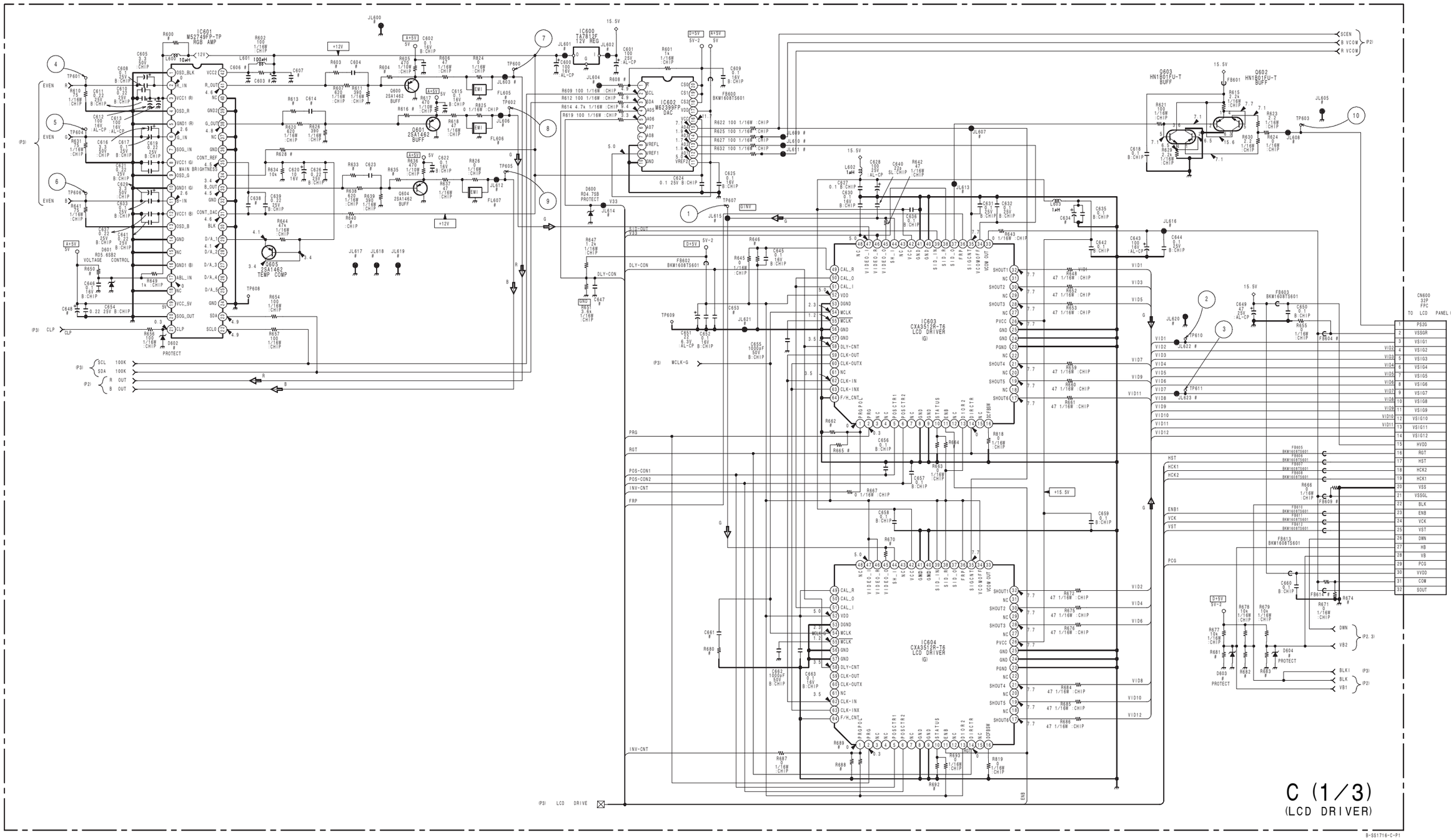
C – A SIDE –

SUFFIX ; -21

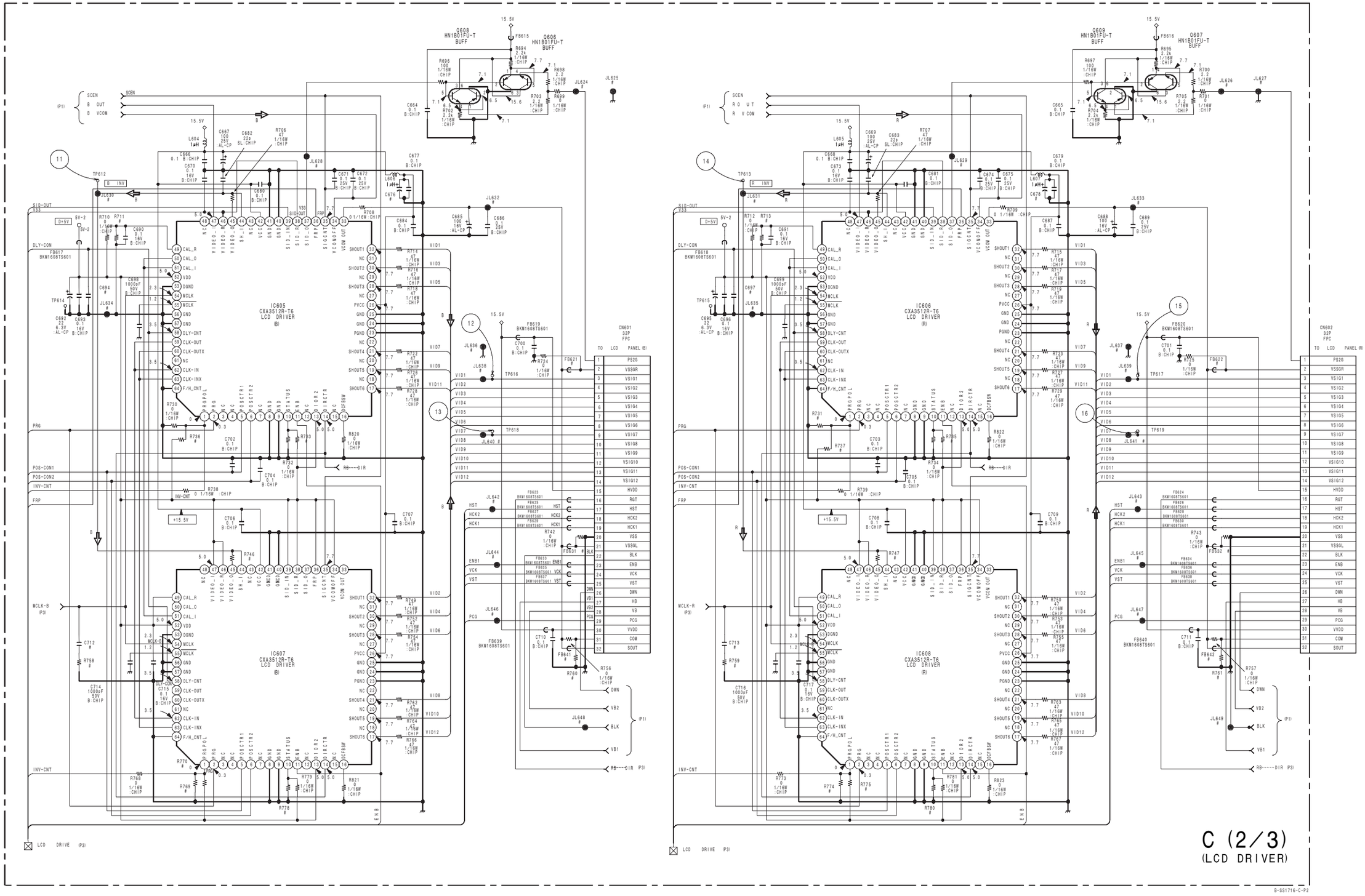
C Board Waveforms

① 9.0 Vp-p TP607 GINV	② 9.0 Vp-p TP610	③ 9.0 Vp-p TP611	④ 0.7 Vp-p TP601 EVEN R
⑤ 0.7 Vp-p TP604 EVEN G	⑥ 0.6 Vp-p TP606 EVEN B	⑦ 1.3 Vp-p TP600	⑧ 1.7 Vp-p TP602
⑨ 1.2 Vp-p TP605	⑩ 1.2 Vp-p TP603	⑪ 9.0 Vp-p TP612 BINV	⑫ 9.0 Vp-p TP616
⑬ 9.0 Vp-p TP618	⑭ 9.0 Vp-p TP613 RINV	⑮ 9.0 Vp-p TP617	⑯ 9.0 Vp-p TP619

- Refer to page 8-28 for Printed Wiring Board
- Refer to page 8-28 for Waveforms
- Refer to page 8-31 for IC Block Diagrams



- Refer to page 8-28 for Printed Wiring Board
- Refer to page 8-28 for Waveforms
- Refer to page 8-31 for IC Block Diagrams



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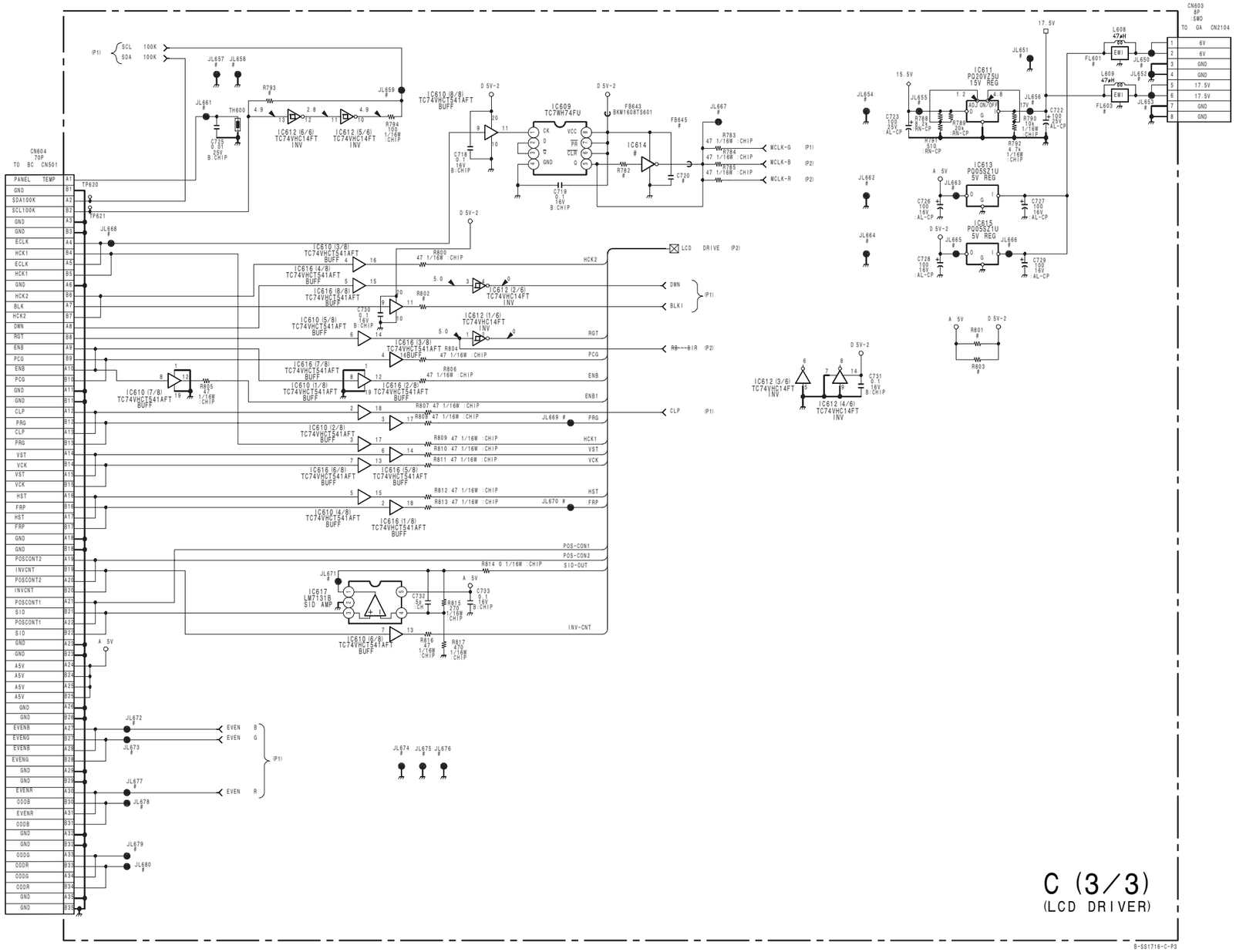
- Refer to page 8-28 for Printed Wiring Board
- Refer to page 8-28 for Waveforms
- Refer to page 8-31 for IC Block Diagrams


CN604
70P
TO BC CN501
CN603
6P
TO GA CN2104
IC609
TC7WH74FU
IC610 (3/8) TC74VHCT541AFT BUFF
IC610 (5/8) TC74VHCT541AFT BUFF
IC610 (7/8) TC74VHCT541AFT BUFF
IC610 (1/8) TC74VHCT541AFT BUFF
IC610 (2/8) TC74VHCT541AFT BUFF
IC610 (4/8) TC74VHCT541AFT BUFF
IC610 (6/8) TC74VHCT541AFT BUFF
IC610 (8/8) TC74VHCT541AFT BUFF
IC612 (6/6) TC74VHC14FT INV
IC612 (5/6) TC74VHC14FT INV
IC612 (2/6) TC74VHC14FT INV
IC612 (1/6) TC74VHC14FT INV
IC612 (3/6) TC74VHC14FT INV
IC612 (4/6) TC74VHC14FT INV
IC614
IC611 PQ20VZ5U 15V REG
IC613 PQ05SZ1U 5V REG
IC615 PQ05SZ1U 5V REG
IC616 (1/8) TC74VHCT541AFT BUFF
IC616 (2/8) TC74VHCT541AFT BUFF
IC616 (3/8) TC74VHCT541AFT BUFF
IC616 (4/8) TC74VHCT541AFT BUFF
IC616 (5/8) TC74VHCT541AFT BUFF
IC616 (6/8) TC74VHCT541AFT BUFF
IC616 (7/8) TC74VHCT541AFT BUFF
IC616 (8/8) TC74VHCT541AFT BUFF
IC617 LM7131B SID AMP
PANEL TEMP
SDA100K
SCL100K
ECLK
HCK1
HCK2
BLK
DWN
RGT
ENB
PCG
CLP
PRG
VST
VCK
HST
FRP
POSCONT2
INVCNT
POSCONT1
SID
EVENB
EVENG
EVENR
ODDB
ODDR
ODDG
MCLK-G
MCLK-B
MCLK-R
LCD DRIVE
POS-CON1
POS-CON2
SID-OUT
INV-CNT
JL657
JL658
JL659
JL661
JL667
JL668
JL669
JL670
JL671
JL672
JL673
JL674
JL675
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JL712
JL713
JL714
JL715
JL716
JL717
JL718
JL719
JL720
JL721
JL722

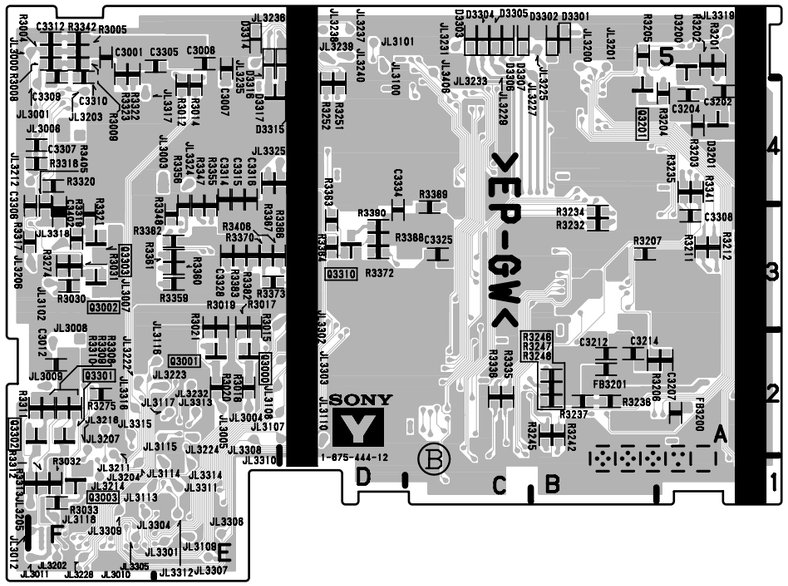
Y
1-675-444-12

IC3002 E-5
IC3003 E-5
IC3004 F-4
IC3007 F-2
IC3200 A-5
IC3201 A-4
IC3202 A-4
IC3203 B-4
IC3204 B-3
IC3301 F-4
IC3302 F-5
IC3303 E-3
IC3304 D-3
IC3401 C-4
IC3402 F-3

Q3000 *E-2
Q3001 *E-2
Q3002 *F-3
Q3003 *F-1
Q3200 A-5
Q3201 *B-4
Q3301 *F-2
Q3302 *F-2
Q3303 *F-3
Q3306 D-4
Q3307 D-4
Q3310 *D-3

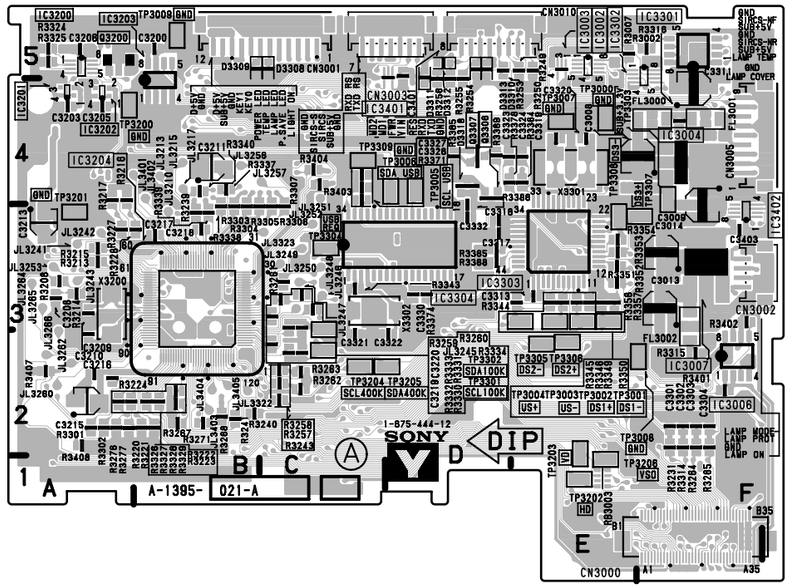
TP3000 E-4
TP3001 E-2
TP3002 E-2
TP3003 E-2
TP3004 E-2
TP3005 D-4
TP3006 D-4
TP3007 E-4
TP3008 F-2
TP3009 B-5
TP3200 B-2
TP3201 A-3
TP3202 E-1
TP3203 E-1
TP3204 C-2
TP3205 D-2
TP3206 F-1
TP3301 D-2
TP3302 D-2
TP3303 E-4
TP3304 C-3
TP3305 E-2
TP3306 E-2
TP3307 F-3
TP3308 E-3
TP3309 C-4

*:B Side mount



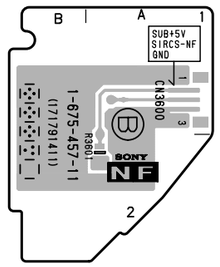
Y – B SIDE –

SUFFIX ; -12



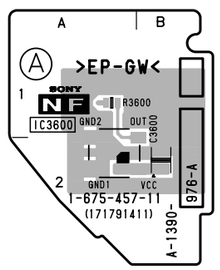
Y – A SIDE –

SUFFIX ; -12



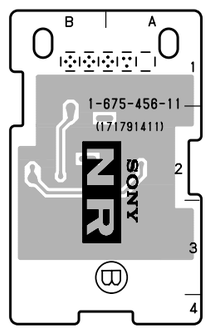
NF – B SIDE –

SUFFIX ; -11



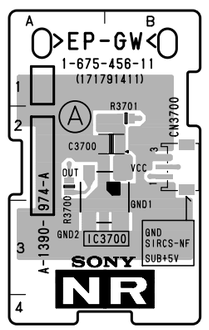
NF – A SIDE –

SUFFIX ; -11



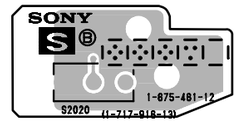
NR – B SIDE –

SUFFIX ; -11



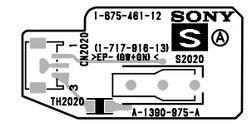
NR – A SIDE –

SUFFIX ; -11



S – B SIDE –

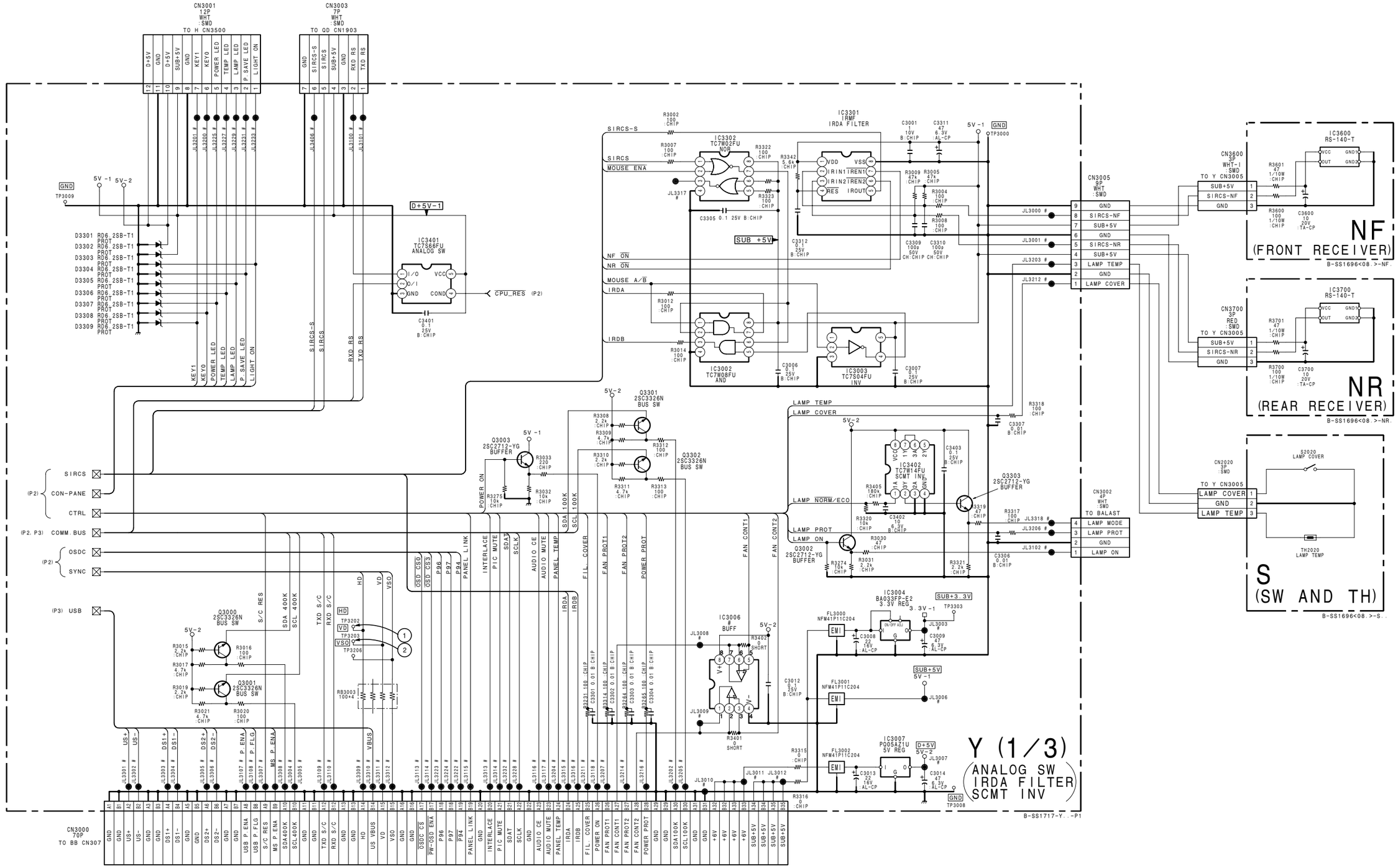
SUFFIX ; -12



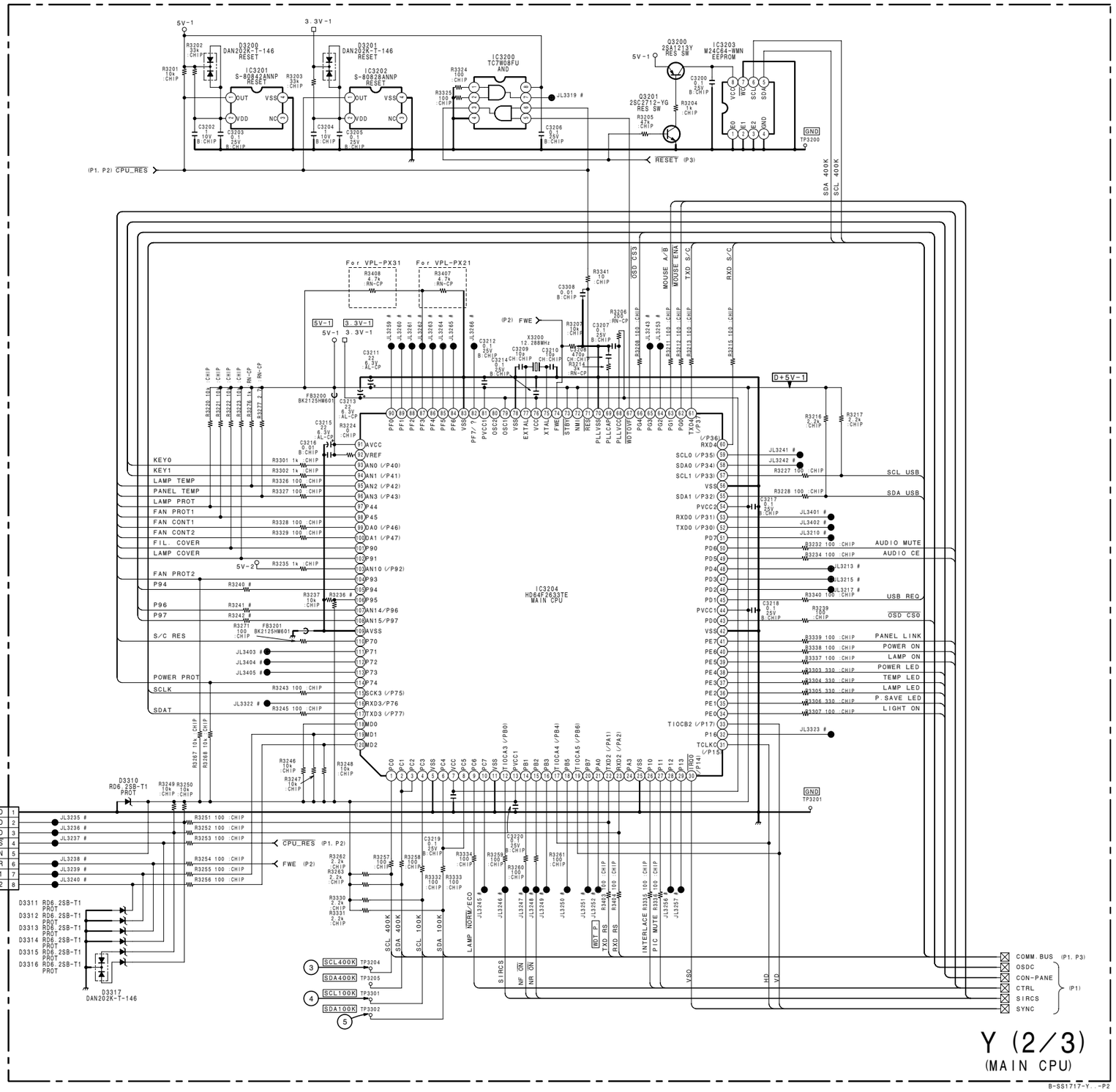
S – A SIDE –

SUFFIX ; -12

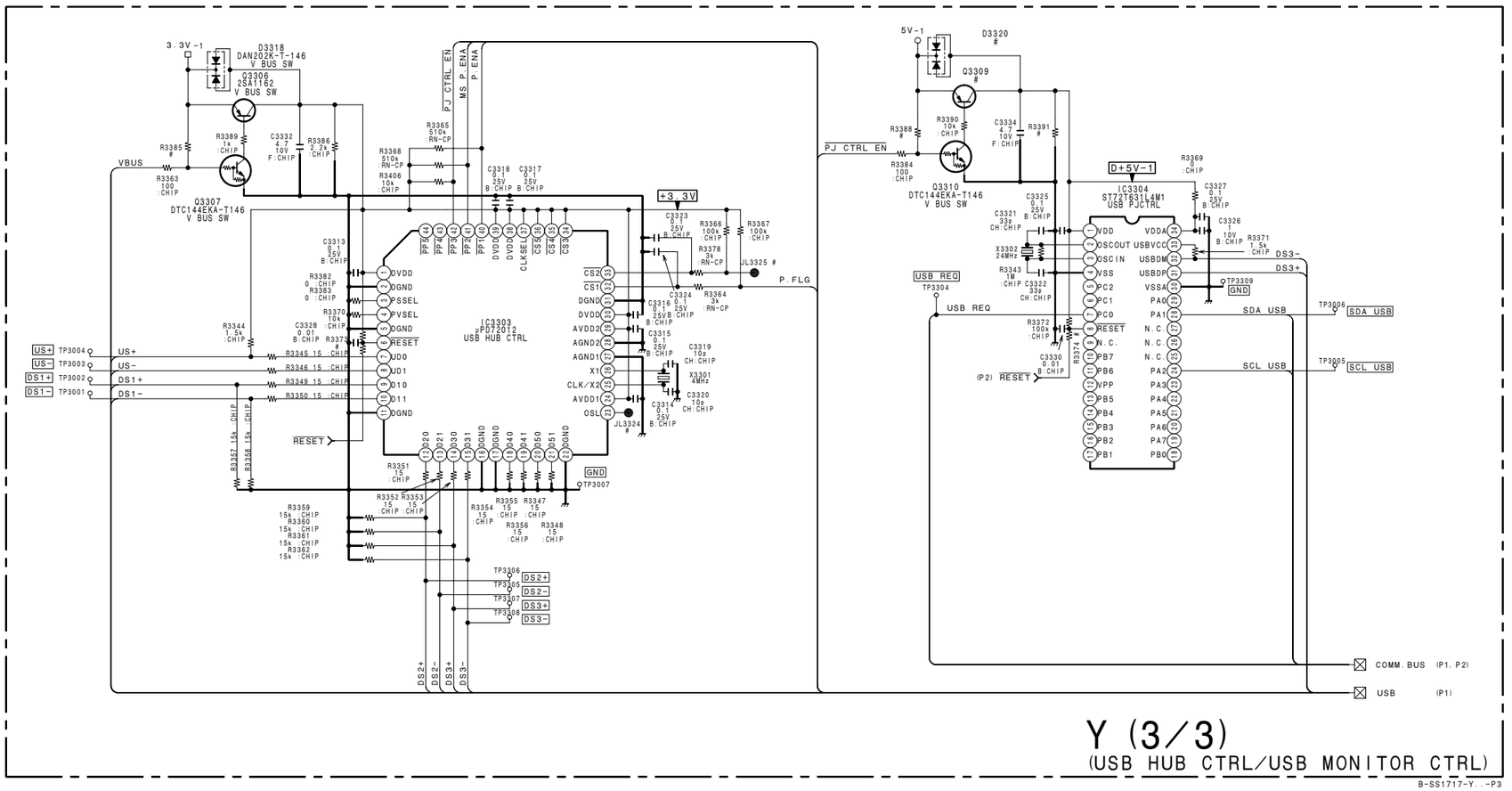
- Refer to page 8-32 for Printed Wiring Board
- Refer to page 8-35 for Waveforms
- Refer to page 8-35 for IC Block Diagrams



- Refer to page 8-32 for Printed Wiring Board
- Refer to page 8-35 for Waveforms
- Refer to page 8-35 for IC Block Diagrams



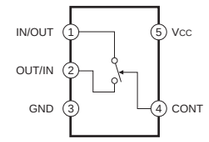
- Refer to page 8-32 for Printed Wiring Board
- Refer to page 8-35 for Waveforms
- Refer to page 8-35 for IC Block Diagrams



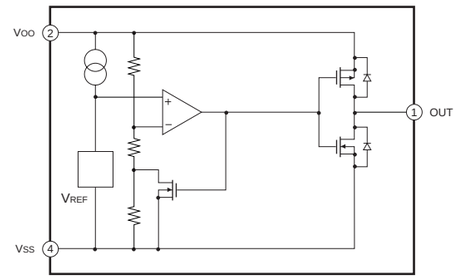
Y Board Waveforms

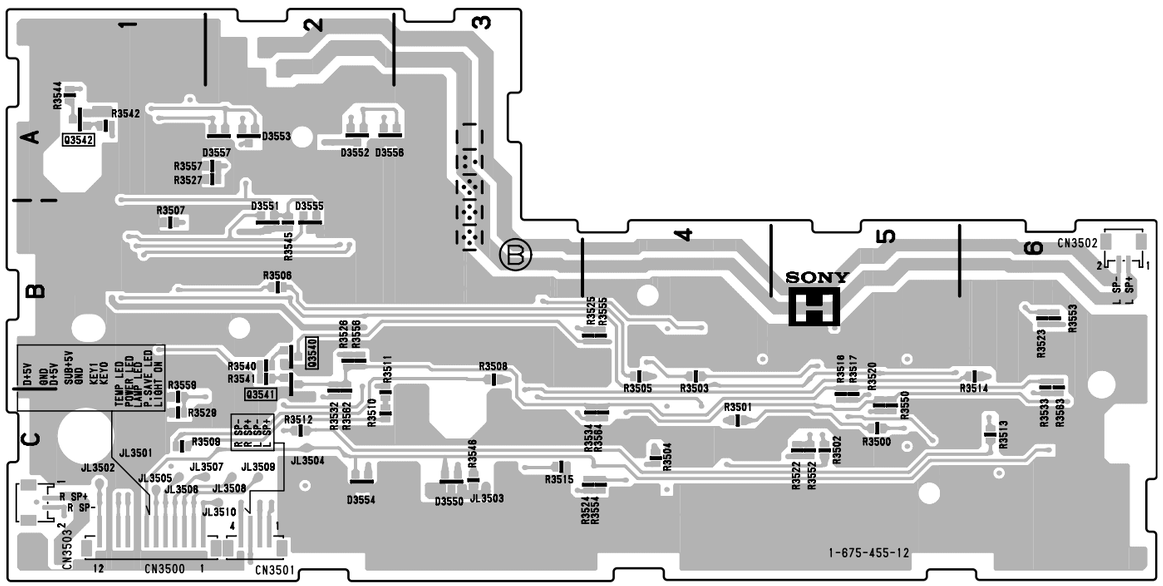
① 3.2 Vp-p TP3202 HD	② 3.2 Vp-p TP3203 VD	③ 4.5 Vp-p TP3204 SCL400K	④ 4.5 Vp-p TP3301 SCL100K
⑤ 4.5 Vp-p TP3302 SDA100K			

TC7S66FU (IC3401)



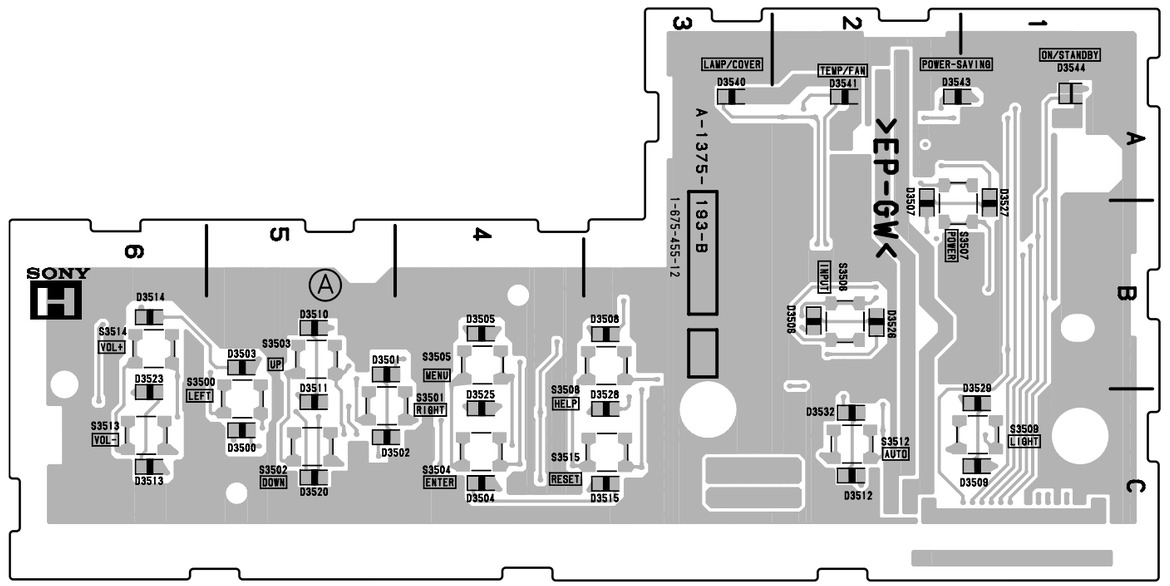
S-80842ANNP-ED4-T2 (IC3201)
S-80828ANNP-ED4-T2 (IC3202)





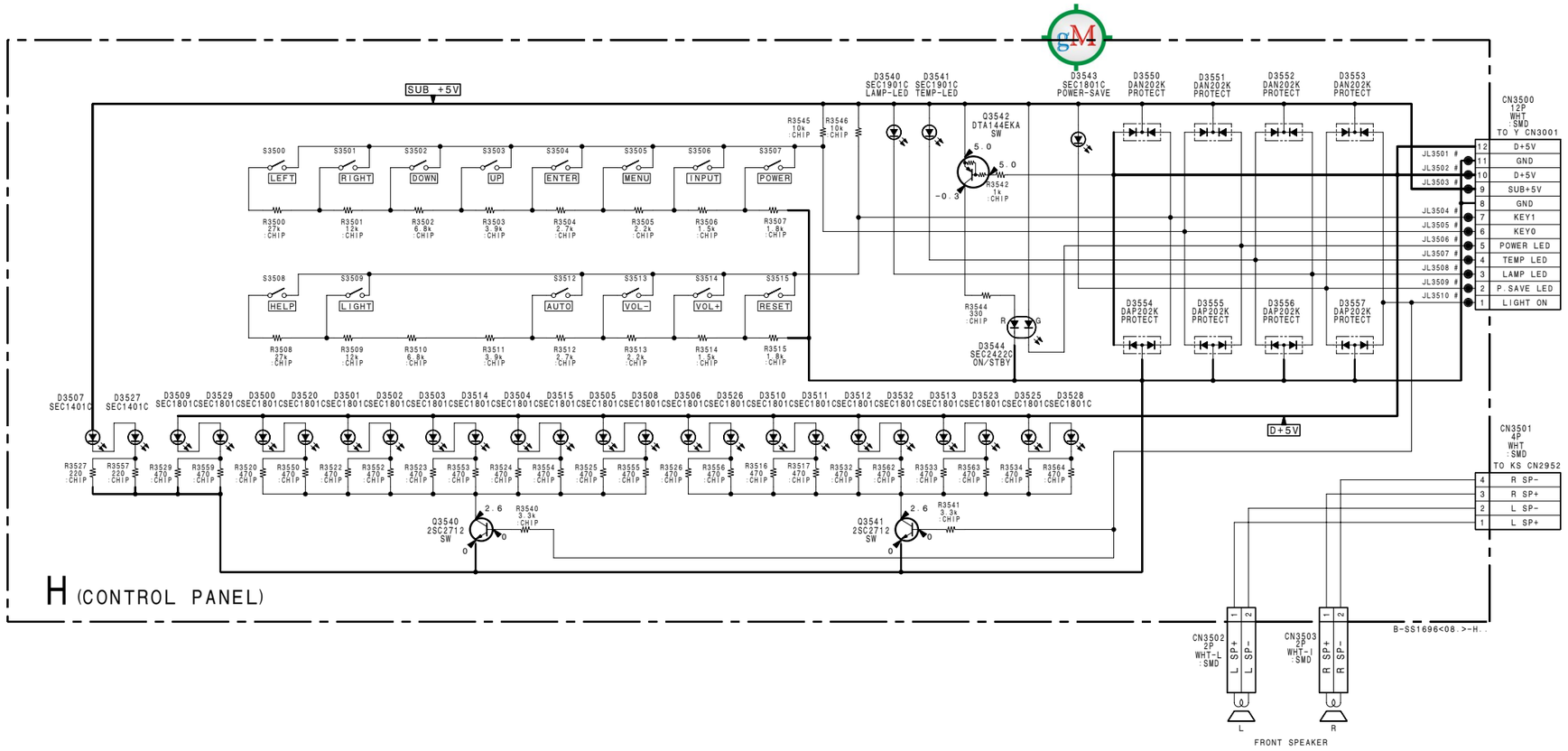
H – B SIDE –

SUFFIX ; -12

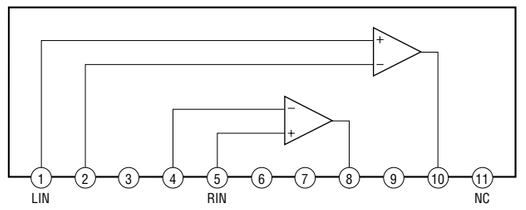


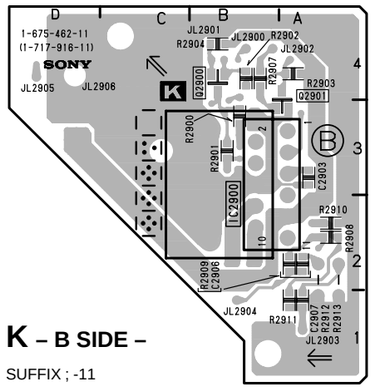
H – A SIDE –

SUFFIX ; -12



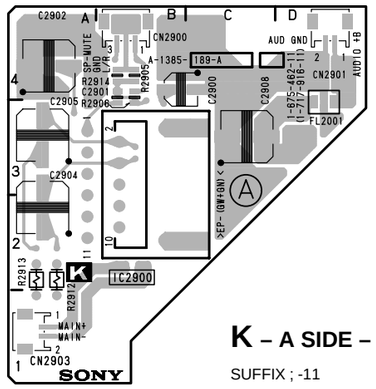
TDA2009A (IC2900)





K – B SIDE –

SUFFIX ; -11



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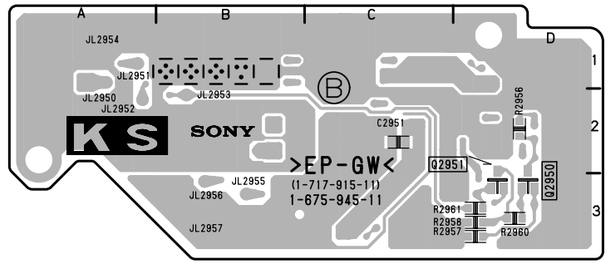

KS – B SIDE –

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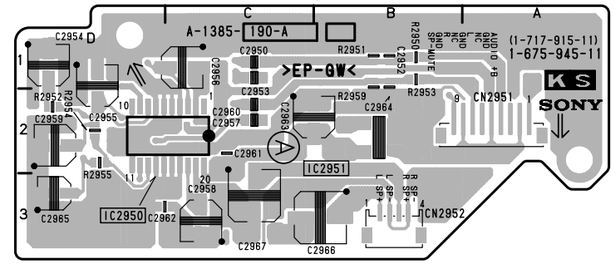

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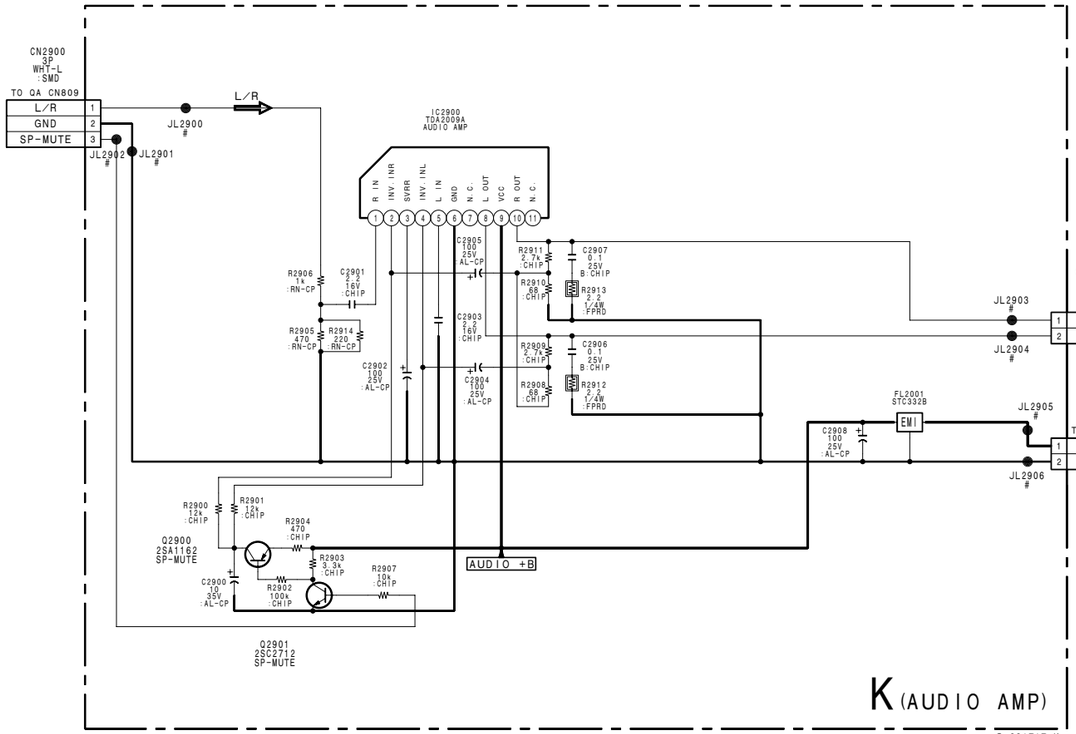
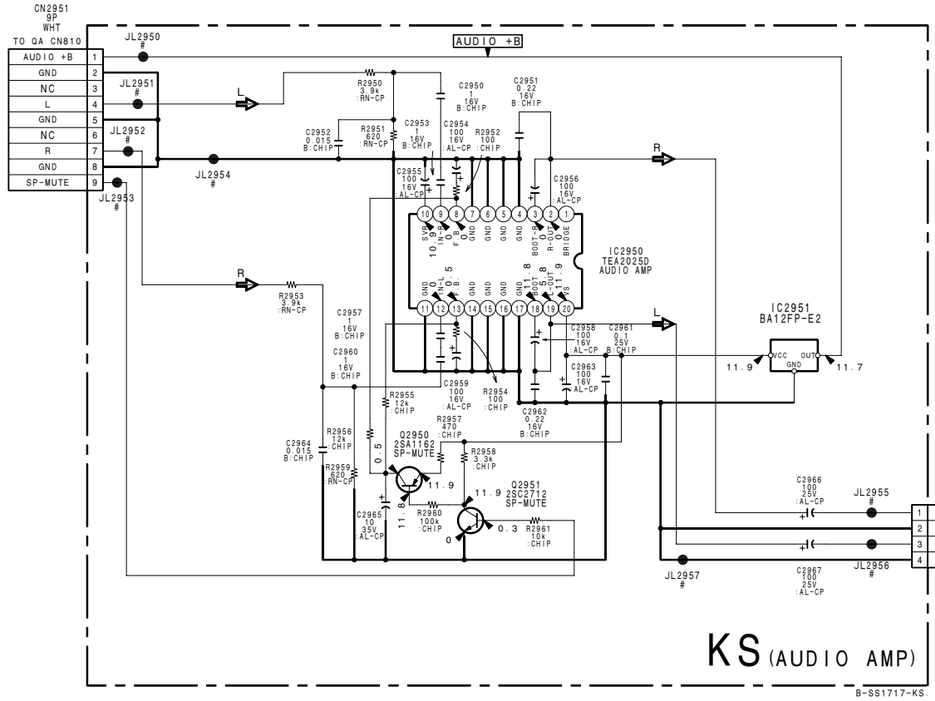
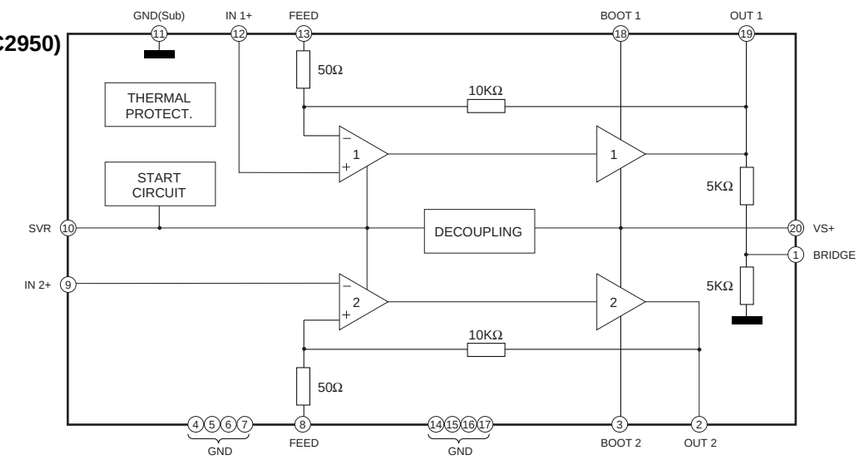
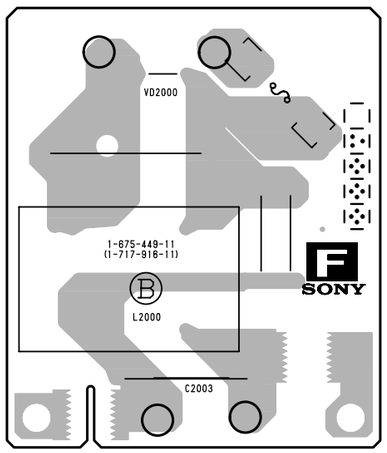




TEA2025D-013TR (IC2950)





F – B SIDE –

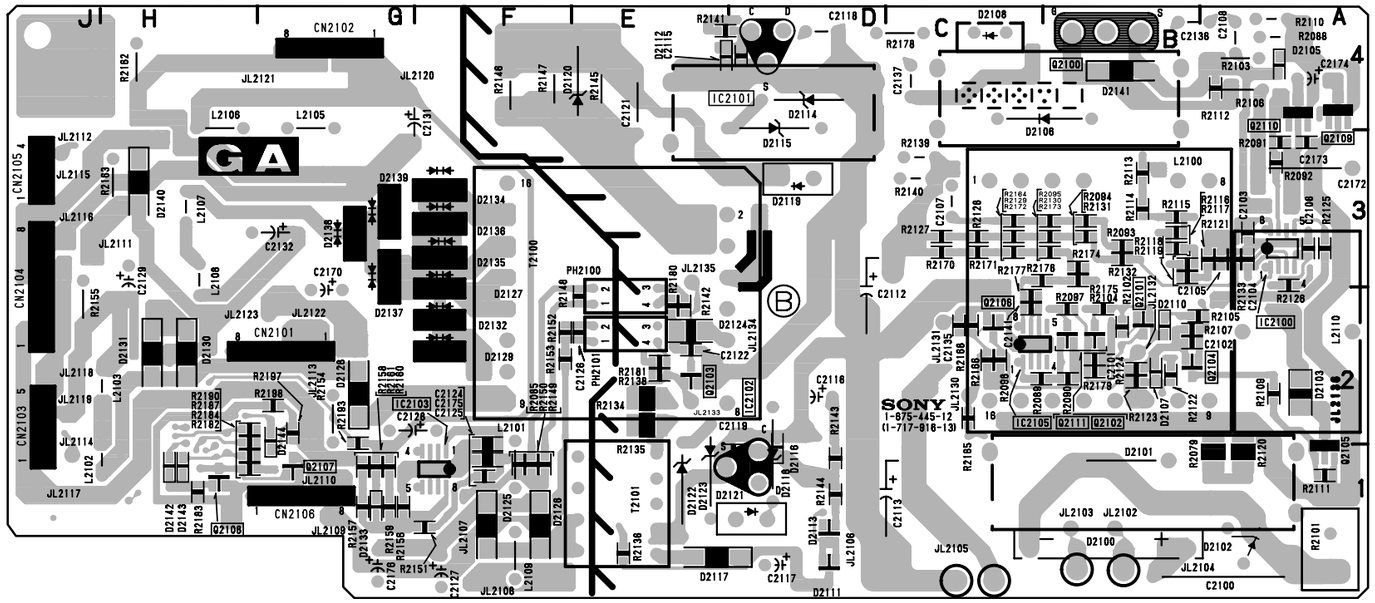
SUFFIX ; -11

GA

1-675-445-12

IC2100	＊A-2
IC2101	D-1
IC2102	D-2
IC2103	＊F-1
IC2104	H-4
IC2105	＊C-2
Q2100	B-4
Q2101	＊B-3
Q2102	＊B-3
Q2103	＊E-2
Q2104	＊B-2
Q2105	＊A-4
Q2106	＊C-3
Q2107	＊G-1
Q2108	＊H-1
Q2109	＊A-1
Q2110	＊A-1
Q2111	＊B-3

＊:B Side mount



GA – B SIDE –

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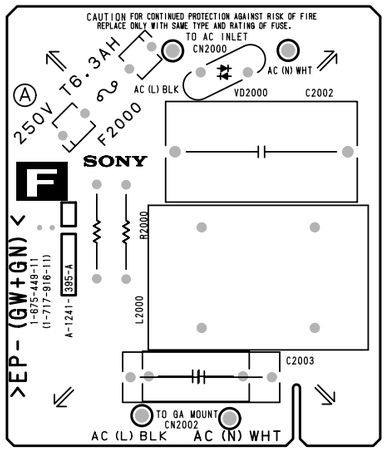

F– A SIDE –

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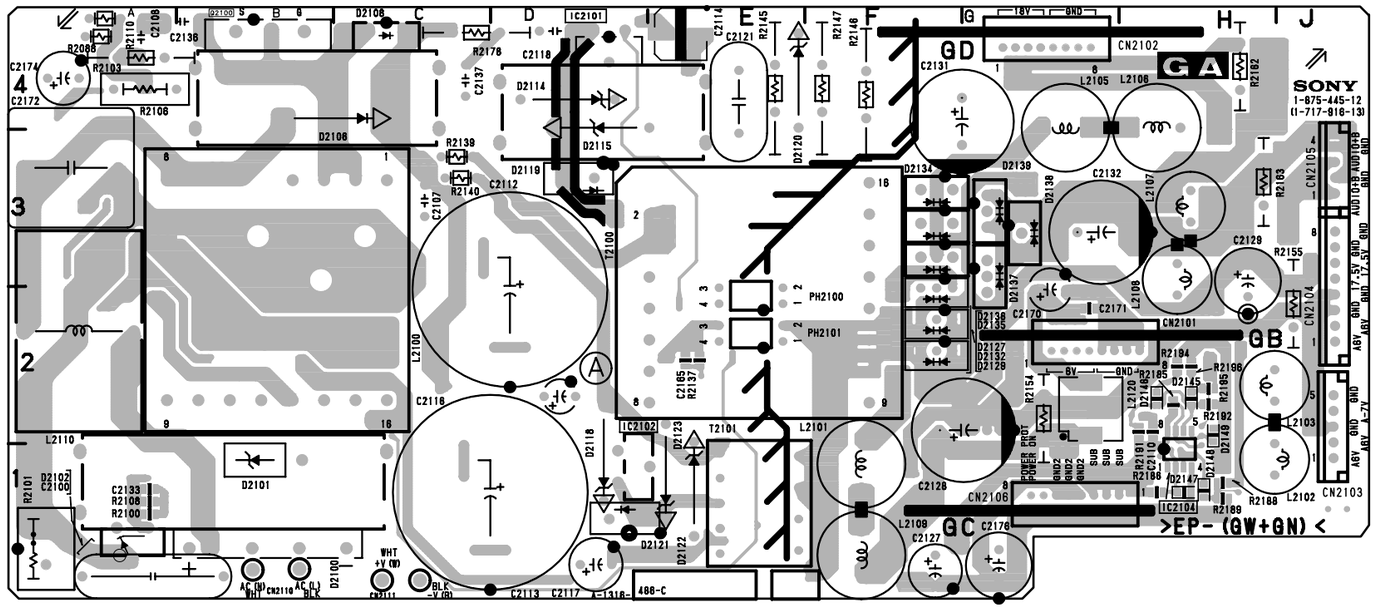
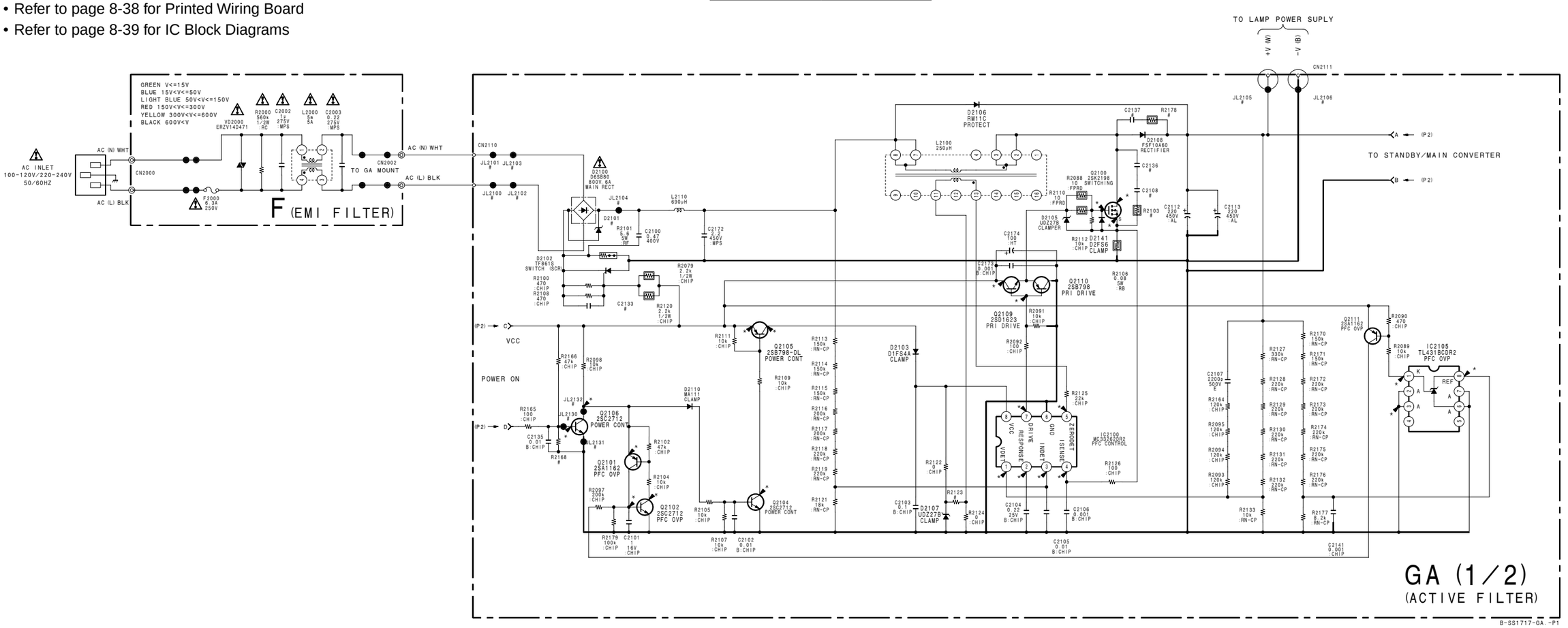


GA– A SIDE –

SUFFIX ; -12

- Refer to page 8-38 for Printed Wiring Board
- Refer to page 8-39 for IC Block Diagrams



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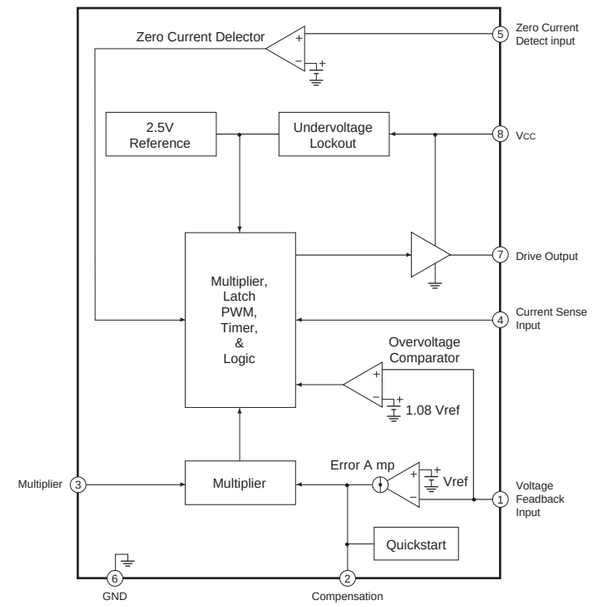
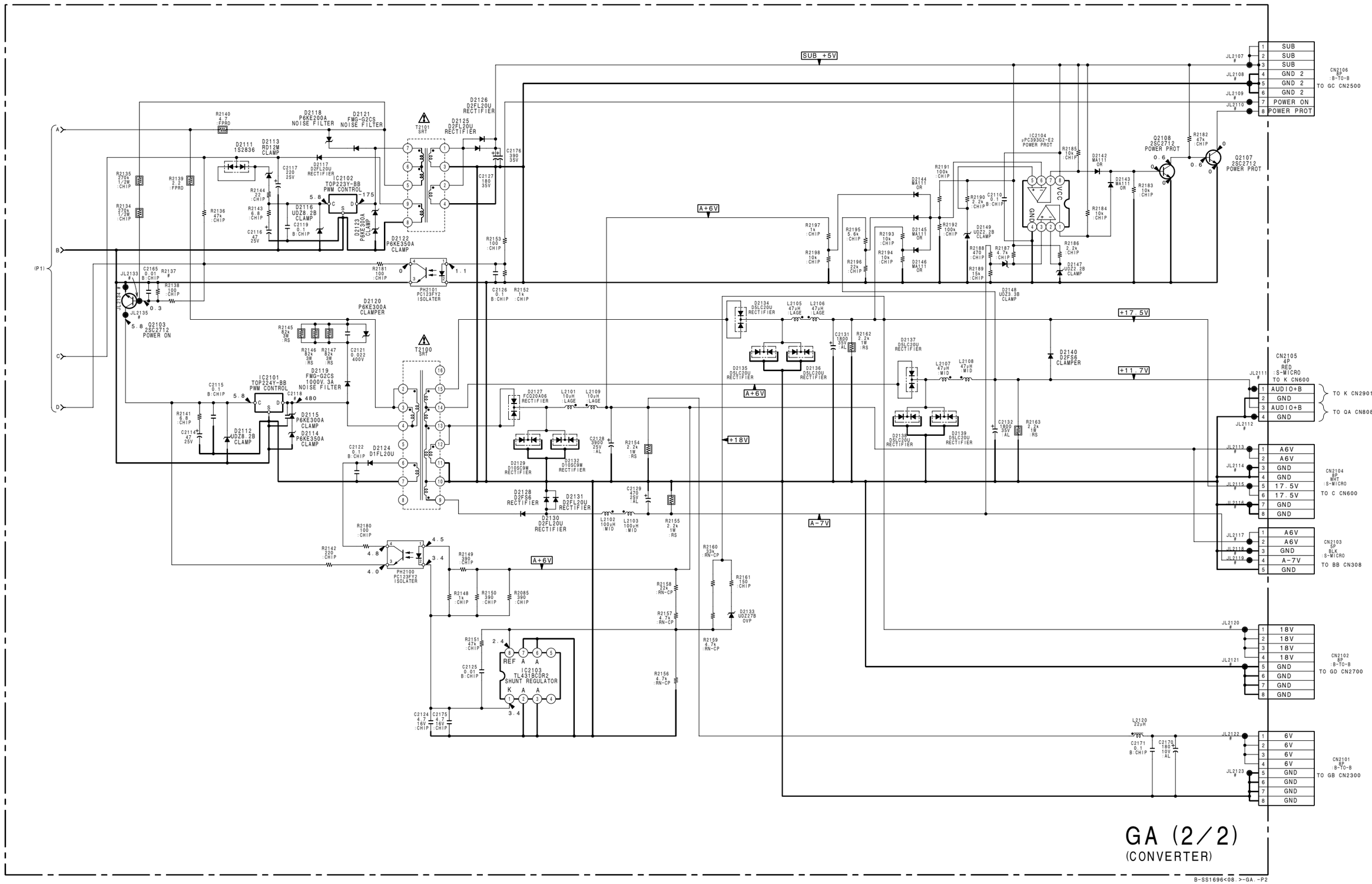


- Refer to page 8-38 for Printed Wiring Board
- Refer to page 8-39 for IC Block Diagrams



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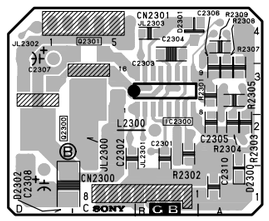

GB – B SIDE –

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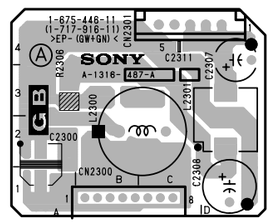

GB– A SIDE –

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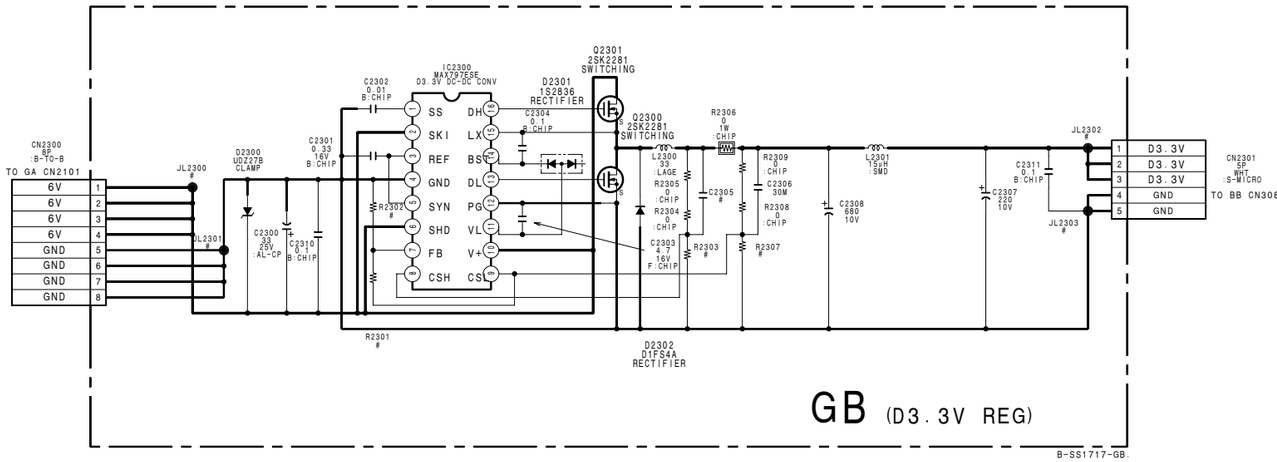
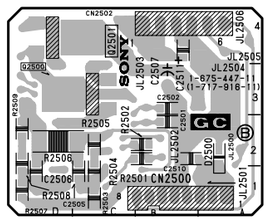
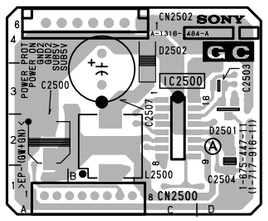




GC – B SIDE –

SUFFIX ; -11



GC– A SIDE –

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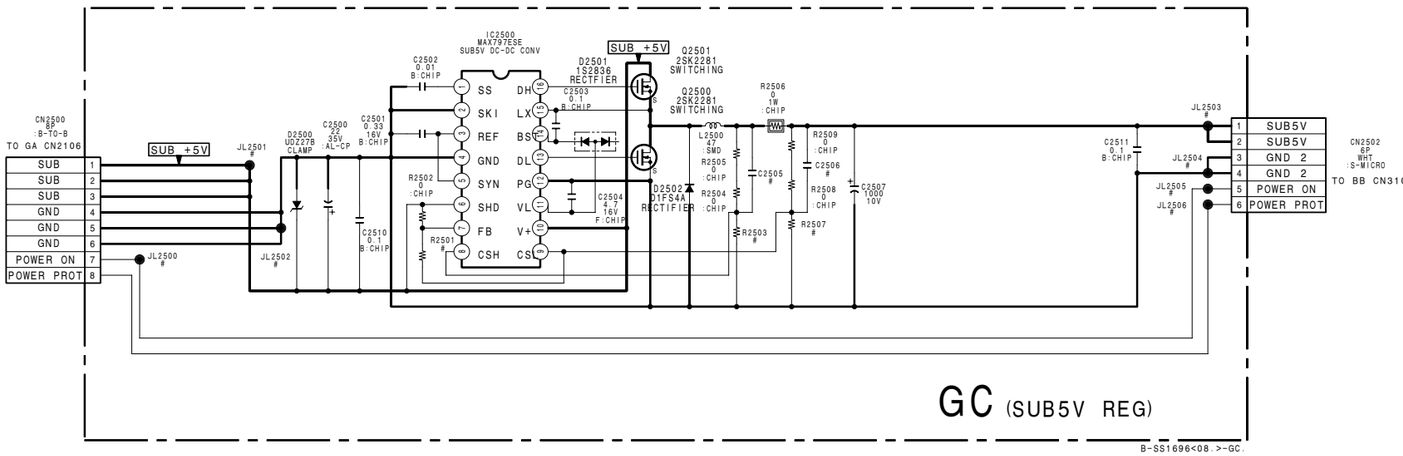

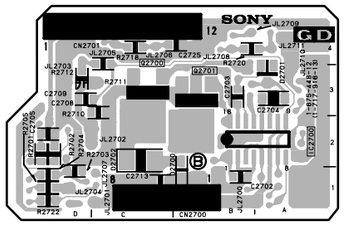

GD – B SIDE –

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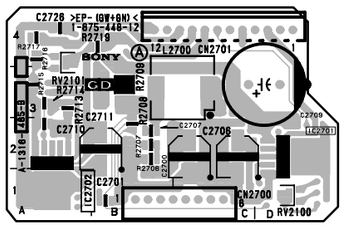

GD– A SIDE –

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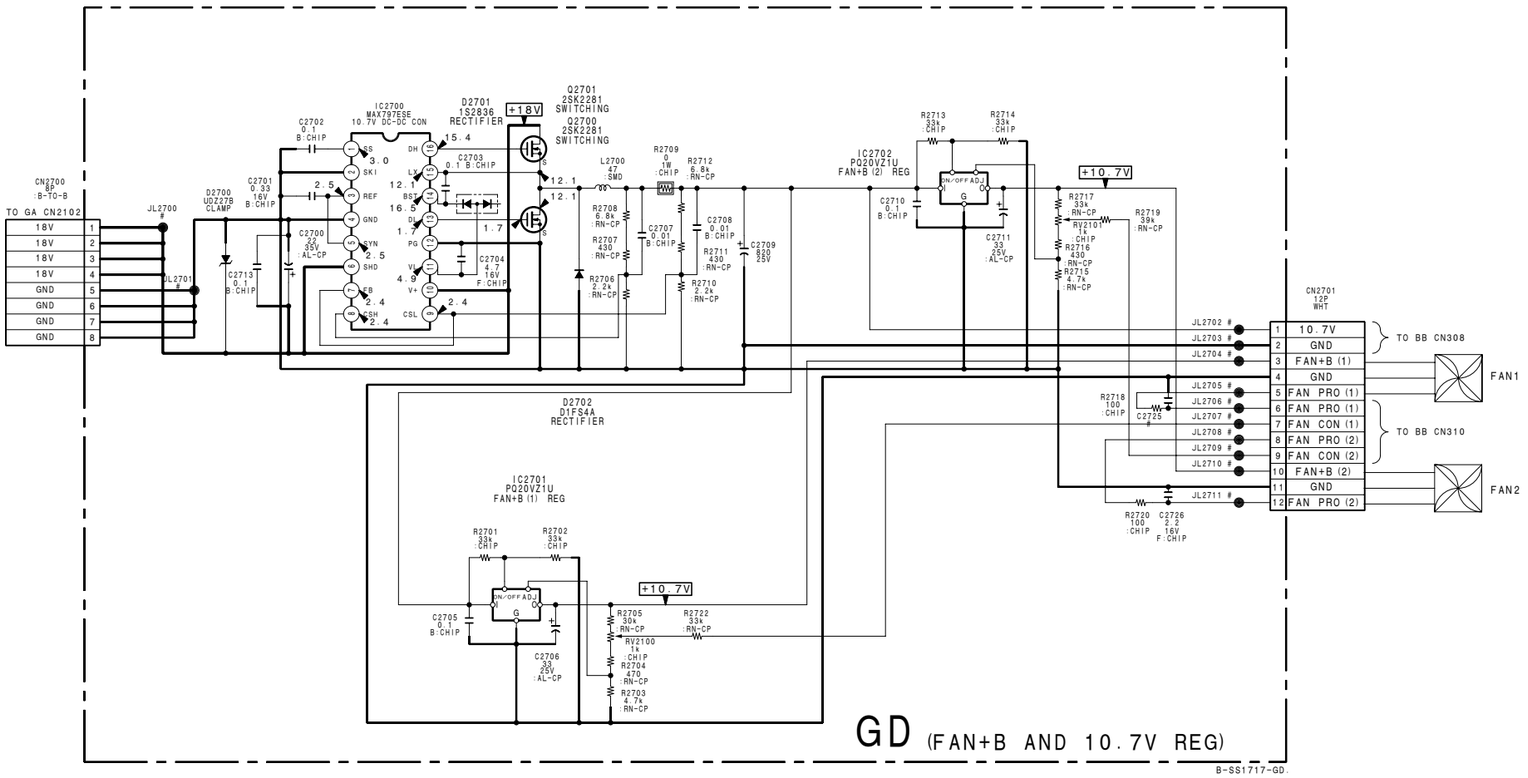

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